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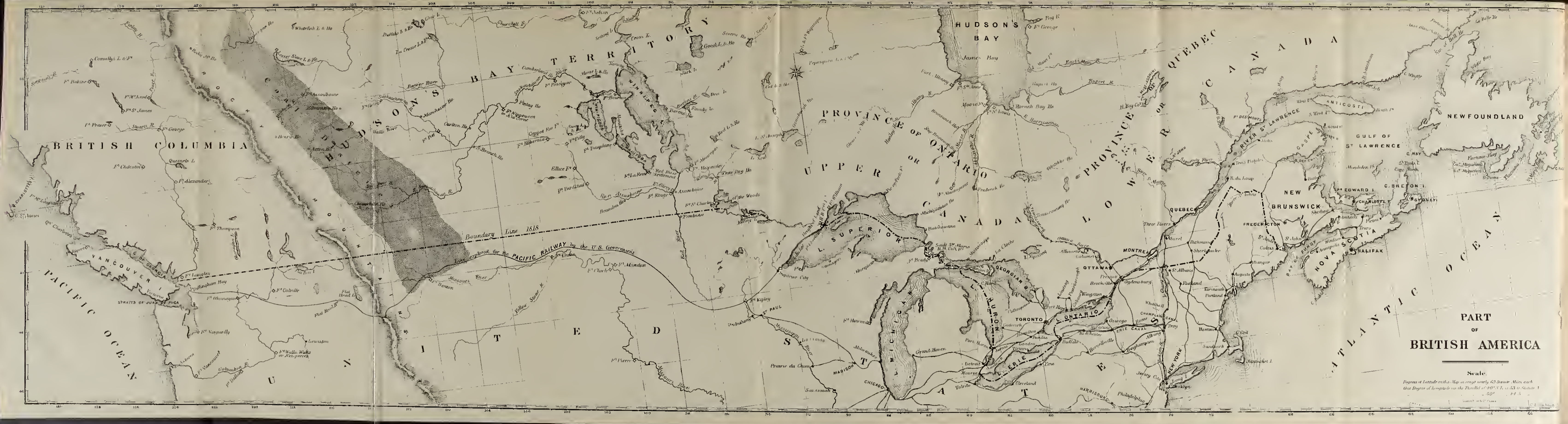
PART
OF
BRITISH AMERICA
Scale.
Degrees of Latitude on this Map are equal nearly 69 Statute Miles each
One Degree of Longitude on the Parallel of 40° N. L. is 53 Statute
BRITISH COLUMBIA
HUDSON'S BAY TERRITORY
ROCKY MOUNTAINS
COAL DISTRICT
PROVINCE OF ONTARIO
UPPER CANADA
PROVINCE OF QUEBEC
LOWER CANADA
HUDSON'S BAY
James Bay
NEW BRUNSWICK
NOVA SCOTIA
NEWFOUNDLAND
GULF OF ST LAWRENCE
ANTICOSTI
RIVER ST LAWRENCE
C. BRETON I.
PR. EDWARD I.
VANCOUVER I.
PACIFIC OCEAN
ATLANTIC OCEAN
UNITED STATES
Boundary Line 1818
Line explored for the PACIFIC RAILWAY by the U.S. Government
L. SUPERIOR
L. HURON
GEORGIAN B.
L. MICHIGAN
L. ONTARIO
L. ERIE
L. WINNIPEG
L. WINNIPEGOS
Red River Settlement
L. of the Woods
QUEBEC
MONTREAL
OTTAWA
TORONTO
KINGSTON
FREDERICTON
HALIFAX
CHARLOTTE
SYDNEY
CHICAGO
NEW YORK
BOSTON
PORTLAND
ST PAUL
DETROIT
BUFFALO
ERIE CANAL
HARRISBURG
MADISON
Victoria
Straits of Juan de Fuca
Fort Garry
Fort Alexander
Cumberland Ho.
Carlton Ho.
Moose Factory
Fort Albany
Rupert Ho.
Sault Ste Marie
Three Rivers
Gaspé
Milwaukee
Grand Haven
Toledo
Cleveland
Philadelphia
Albany
Oswego
Ogdensburg
St Albans
Rutland
Bangor
Augusta
St John
Saint Andrews
Truro
Windsor
Annapolis
Pictou
C. Ray
Cape North
Bay of Fundy
Prairie du Chien
Superior City
Fort Benton
Missouri River
Yellow Stone R.
Red River
Mississippi River
Columbia R.
Fort Vancouver
Fort Walla Walla
Fort Colville
Fort Okanagan
Fort Langley
Fort Nesqually
Fort Alexandria
Fort St James
Fort George
Fort Chilcotin
Fort Fraser
Fort Thompson
Quesnel L.
Ellice Fort
Fort Pelly
Fort Qu'Appelle
Fort Ellice
Norway Ho.
Churchill R.
Saskatchewan R.
S. Branch Ho.
Fort Francis
Fort William
Michipicoten
Moose R.
Albany R.
Fort George
Rupert R.
Mingan
Fort Chimo

Gov. Doc
Can
(Prov)
P

Au très-Revd T. E. Hamel
Recteur de l'Université Laval
Québec

GENERAL REPORT

Avec les compliments du

OF THE

Ministre des Travaux Publics

Commissioner of Public Works,

FOR THE YEAR ENDING 30TH JUNE,

1867. ie 1866/67

FURNISHED IN COMPLIANCE WITH THE PROVISIONS OF THE TWENTY-EIGHTH CHAPTER OF THE CONSOLIDATED STATUTES OF CANADA, SECTION TWENTY-FOUR, AS AMENDED BY THE TWENTY-SEVENTH AND TWENTY-EIGHTH VICTORIA, CHAPTER SIX.

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1868.

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REPORT

OF THE

COMMISSIONER OF PUBLIC WORKS,

FOR THE YEAR ENDING 30th JUNE, 1867.

To His Excellency the Right Honorable CHARLES STANLEY, *Viscount* MONCK, *Governor General of Canada, &c., &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY:—

The present Report being the last that will be submitted on the Public Works of the United Provinces of Upper and Lower Canada, it is deemed proper on this occasion to place on record a brief description of the most important of these works, of the principal circumstances attending their construction, and of the condition in which they will be found on their transfer to the General Government. A brief glance at the physical geography of the great tract of country, the commerce of which our Public Works were designed to accommodate, will help us to appreciate their importance.

The great mountain ranges of the North American continent consist of two chains, viz.: the Rocky Mountains lying to the west, and running parallel to the Pacific coast throughout the whole length of North America; and the Appalachian chain or Alleghany Mountains, lying to the east and running parallel to the Atlantic coast.

The latter of these ranges extends from the State of Georgia to the Catskill Mountains, on the right bank of the Hudson, and re-appears on the other side of that river in several broken parallels, the chief of which are known under the name of the Green and White mountains.

These mountains, on reaching the latitude of Quebec, run parallel to the St. Lawrence, and terminate at the northern extremity of Gaspé in the Gulf.

The area of the vast plain comprised within these two ranges, having an average breadth of upwards of 1,400 miles, and extending lengthwise from the Gulf of Mexico on the south, to the Arctic Ocean in the north, may be computed at 3,250,000 square miles.

The great Canadian lakes are situated in the vicinity of the centre of this extensive region, and nearly in the same latitude the continent is traversed, as far as the Rocky Mountains, by a low water shed from which the great plain declines both ways, to the north and to the south. The waters of the northern declivity of this plain flow into the Arctic Ocean, Hudson's Bay and the Gulf of St. Lawrence; the waters of its southern declivity flow through the Mississippi into the Gulf of Mexico.

The region of the northern slope abounds in immense lakes, and rivers of gigantic proportions. One of the chief of these is the Mackenzie River, which, after connecting several lakes scarcely less in their area than our large Canadian lakes, falls into the Arctic Ocean. Another of these large rivers is the Saskatchewan, which, flowing through Lake Winnipeg and others of less note, enters Hudson's Bay under the name of the Nelson River.

The third, and from its position the most important artery of this Northern slope, is the River St. Lawrence, which, entering the Western extremity of Lake Superior, issues from the Eastern extremity of Lake Ontario, and flowing in a north-easterly direction forms in its course the three expansions known as Lakes St. Francis, St. Louis and St. Peter. Below Quebec it widens gradually into majestic proportions, attaining to one hundred miles in width at its junction with the Gulf of St. Lawrence. Computing from its source to the Straits of Belle-Ile, the whole course of this grand river may be stated at 2,500 miles.

Although the three great rivers just described are the chief arteries by which this northern slope is drained, there remains also to be mentioned the "Albany," the "Churchill" and the "Great Fish" rivers, all of considerable magnitude and discharging into Hudson's Bay and the Arctic Ocean. But with the exception of the St. Lawrence none of these northern rivers can ever become highways for produce to the ocean, for the reason that in the vicinity of their outlets at Hudson's Bay and the Arctic Ocean, the severity of the climate is such as to prevent the formation of ports accessible to shipping. The St.Lawrence, on the other hand, besides its easy access to the Atlantic, abounds in numerous harbors, and it follows, that whatever may be the future increase of population and products on the banks of the other great northern rivers, any traffic arising therefrom must necessarily seek its outlet through the valley of the St. Lawrence.

The Mississippi.—On the southern declivity of the great plain there are fewer lakes to be found than on the northern side, but the rivers which flow from the mountain chains on the east and west are great and numerous, and convey the waters of this declivity to one main artery, which has its commencement in the water-shed described above, and which extends throughout the whole incline to the Gulf of Mexico. This artery is called the Mississippi River; and from its position and extent, it is eminently adapted to be the southern highway to the Ocean, for the produce and traffic intended for a southern port.

The Mississippi, though its course is very tortuous and its current very rapid, affords a sufficient depth of water at all seasons of the year to enable the largest class of steamers to ascend as high as Cairo, at its confluence with the Ohio—a distance of 1,097 miles from its mouth;—steamers of a smaller class ascend 600 miles higher, and vessels of two feet draft can ply as far up as the Falls of St. Anthony, which are situated about 1,957 miles from the Gulf. The entire length of the river from the sea to its source is 2,616 miles, and its principal port is New Orleans, some 105 miles from its outlet.

This great river discharges into the sea through several mouths, the largest of which, called the South-west Pass, admits vessels drawing 18 feet of water, to ascend to New Orleans. Coasting steamers and small craft usually go through Rigolets Inlet into Lake Pontchartrain; from thence the city is reached by a canal 5 miles long and a railway.

With all the advantages of such a long course of unimpeded navigation, the Mississippi, owing to natural causes, is, nevertheless, compelled to yield up a portion of its traffic to the St. Lawrence. The grain and other perishable products raised within a certain boundary of the Mississippi Valley, and intended for exportation, would be damaged by transportation through so hot a climate as prevails at New Orleans. This conclusion has been fully confirmed by the acts of the people who inhabit the valley of the Mississippi, for they have connected the vast inland navigation of this river with the lakes which discharge through the St. Lawrence, by four lines of Canals and numerous lines of Railways, so as to obtain an outlet for their produce by Atlantic ports, instead of allowing it to proceed by the Mississippi River to New Orleans.

From the above brief sketch of the chief characteristics of the Mississippi River it is manifest that the St. Lawrence meets with no competition from the Mississippi as a channel for the conveyance to the Ocean of grain and other perishable produce, that the usefulness of the Mississippi is chiefly confined to navigation, and that it is incapable of affording the necessary means to accommodate a manufacturing interest, the only water-power available for such purposes being in the vicinity of its source and at the Falls of St. Anthony.

The St. Lawrence.—The River St. Lawrence runs through the whole length of Canada, affording a water communication from the Atlantic Ocean to the very heart of the most fertile portion of North America. It is navigable for the largest class of sea-going vessels up to the Port of Montreal, a distance of 986 miles from the ocean. Its course above that city is in many parts traversed by rocky barriers, some of which serve as dams to maintain, at their present height, the waters of our great lakes, and produce the peculiarity of a river whose current is concentrated into comparatively short distances, with vast spaces of tranquil water intervening.

In its course the St. Lawrence furnishes water-power for manufacturing purposes, which may be said to be practically unlimited in its extent, and which, with the great lakes as reservoirs, is, perhaps, the most permanently reliable in the world. This water power is conveniently distributed between certain localities, such as Montreal, the Cascades, the Cedars, Côteau du Lac, the Long Sault, Niagara, and Sault Ste. Marie, while the aggregate power available from the tributary waters of the St. Lawrence is so vast in itself, and is distributed over so great an area of country, that the mere labor of ascertaining its extent would be a work of considerable magnitude.

It has already been stated that the Appalachian range of mountains, extending from the mouth of the St. Lawrence to the Gulf of Mexico, separates the interior of the continent from the Atlantic,—that the Mississippi and the St. Lawrence are the only outlets from these extensive regions, and that the more temperate climate of the countries traversed by the St. Lawrence renders that river the most important channel for traffic to the ocean. The value of the St. Lawrence in this respect is fully illustrated by the great efforts made by the engineers of the United States to overcome, by artificial means, the want of a similar advantage in their own country. Thus, the inhabitants of New York, availing themselves of the apparent break in the Appalachian chain, made by the Hudson River, conceived the execution of the Erie Canal, 350½ miles in length, so as to connect the waters of the great lakes with the Atlantic, *viâ* the Hudson River, and thus to turn the course of Western traffic from its natural channel, *viâ* the St. Lawrence. This Canal crosses the summit between the basin of the St. Lawrence and that of the Hudson, and its capacity for traffic is regulated by the quantity of water available for the supply of its summit reaches, which is limited.

The rapid peopling of the country adjacent to the great lakes, may be said to have been chiefly effected by the facilities for transport offered by the Erie Canal; for previous to its opening in the year 1825, and before the improvements of the navigation of the St. Lawrence were accomplished, the farm produce of the shores of Lakes Erie and Huron was of little value, and there were consequently few inducements to encourage the settlement of an agricultural population in that region.

When this Canal was first opened, its chief business was to convey the immigrant from the sea-board to the interior of the country; and for several years afterwards its traffic continued to be the conveyance of manufactured goods and merchandise from the east, for the consumption of the western settler; but it brought little or nothing in return from the west.

After a certain period this order of things became reversed, and the West began to return its grain and other products in exchange for the articles imported, and so rapid was the immense development of this trade, that, in a few years, the western grain crop, exclusive of rice, was larger than that produced by the remainder of the American Union. The development of the West called forth a corresponding activity in the East, and as the prosperity of one section was co-ordinate with that of the other, they both grew with a rapidity unexampled. Nor were the people of New York alone, in endeavoring to give a direction to the course of western trade. Nearly all the States lying on the Atlantic coast aimed at forming communication with the West, and it is impossible to view without admiration the enterprise and ingenuity displayed in the great works undertaken for that purpose; their lines of railway are carried over hilly regions, their canals are pushed up to the very foot of the mountains and, with the exception of some short portages, establish water communication by means of light canal boats between the waters of the West and the Atlantic Ocean. These railways have now become invaluable, and though originally intended chiefly as highways for all kinds of western produce, they have become the carriers of a great passenger traffic, of the mails, light goods, and especially of those perishable articles, the quick delivery of which is so necessary to meet the contingencies of a fluctuating market. These energetic efforts on the part of our neighbors were doubtless stimulated by a desire to prevent the traffic of the West from following the St. Lawrence, which has already been demonstrated to be its natural course; for we see that no sooner were the works for clearing away the impediments to the navigation of this river entered upon, than the Americans, with renewed energy, pushed to completion their lines of canals and railways.

It is evident that those who designed the Public Works of Canada, besides desiring to provide for the immediate wants of the country, had also in view the prospects of the western trade, and carried their plans out on such a scale, as, in their estimation, would b commensurate with its requirements, fully confident that whatever might be the energy and ingenuity displayed by our neighbors in their artificial contrivances, the natural advantages possessed by the St. Lawrence would, in the end, assert its superiority.

The Government of this country has had under its exclusive control the improvement of the navigation nearly since the commencement of the works while private companies have built our railway lines, those other great channels for traffic, which assist so materially in the development of the country. These two systems have become co-operative, uniting as the separate parts of one machine, to accomplish the carrying trade of the country.

These preliminary observations point to the conclusion that it is the destiny of the people who inhabit the Valley of the St. Lawrence, to become not only the chief carriers between the Eastern and Western States, but at no distant day, the chief manufacturers of North America; and also that however tardy our people may have been in improving and perfecting the resources so lavishly bestowed upon their country by nature, there is every reason to believe that Canada will, under the impulse of her new politcal organization, soon attain the position to which she is entitled.

The Department of Public Works had under its charge, up to the 30th June, 1867:—

THE CANALS.
THE WORKS ON NAVIGABLE RIVERS.
THE HARBORS.
THE LIGHT-HOUSES, BEACONS AND BUOYS.
THE SLIDES AND BOOMS.
THE ROADS AND BRIDGES.
THE PUBLIC BUILDINGS, and
THE PROVINCIAL VESSELS.

CANALS.

The Provincial Canals were designed for the purpose of overcoming the natural obstructions which were found on the routes of the following lines of Canadian inland navigation, viz:—

1.—The St. Lawrence navigation.
2.—The Montreal and Kingston, *viâ* the Ottawa.
3.—The Richelieu and Lake Champlain navigation,

ST. LAWRENCE NAVIGATION.

The St. Lawrence navigation extends from the Straits of Belle-Ile to Fond du Lac, at the head of Lake Superior, a distance of 2,384 statute miles.

The Canadian Canals on this route are the Lachine, the Beauharnois, the Cornwall, the Farran's Point, the Rapide Plat, the Galops and the Welland. Their united length is $70\frac{83}{100}$ miles, and the total lockage is 536½ feet, through 54 locks.

The Farran's Point, Rapide Plat and Galops Canals, are also known under the name of the Williamsburgh Canals.

The Sault Ste. Marie Canal, $1\frac{1}{17}$ miles in length and 18 feet lockage, avoiding the Sault Ste. Marie, and uniting Lake Huron and Lake Superior, was constructed by a Company with the aid of the United States Congress. It lies on the American side of the river. Lake Superior is about 600 feet above the highest tidal flow of the St. Lawrence, at Three Rivers.

TABLE OF DISTANCES.

SECTIONS OF NAVIGATION.	STATUTE MILES.	
	Intermediate Distances.	Total Distance from Belle-Ile.
From the Straits of Belle-Ile to the head of tide water (Three Rivers)....	900	....
From head of tide water (Three Rivers) to the Lachine Canal	86	986
The Lachine Canal	8½	994½
From Lachine Canal to Beauharnois Canal	15¼	1009¾
The Beauharnois Canal	11¼	1021
From the Beauharnois Canal to the Cornwall Canal	32¾	1053¾
The Cornwall Canal	11½	1065¼
From the Cornwall Canal to Farran's Point Canal	5	1070¼
The Farran's Point Canal	¾	1071
From Farran's Point Canal to Rapide Plat Canal	10½	1081½
The Rapide Plat Canal	4	1085½
From Rapide Plat Canal to the Iroquois and Galops Canal	4½	1090
The Iroquois and Galops Canal	7⅝	1097⅝
From Iroquois and Galops Canal to the Welland Canal	236⅜	1334
The Welland Canal	27	1361
From the Welland Canal to Sault Ste. Marie Canal	625	1986
The Sault Ste. Marie Canal	1	1987
From Sault Ste. Marie Canal to Fond du Lac, head of Lake Superior	397	2384

For details of intermediate distances between places on this route, and of the distances from Quebec and the Head of Lake Superior to Liverpool—see Appendix No. 2, pages 9,-10.

For details respecting the extent of Lake and River Navigation—see Appendix No. 2, page 11.

For table of distances to Liverpool from Halifax, St. John, Portland and Quebec—see Appendix No. 20½, at page 199.

For table of distances from the Principal Sea-Ports of North America to Liverpool, Havre, Havana and Rio Janeiro—see Appendix No. 56, at page 436.

LACHINE CANAL.

Length of Canal		8½	statute miles.
Number of locks		5.	
Dimensions of locks		200	feet × 45 feet.
Total rise of lockage		44¾	feet.
Depth of water on sills	at 2 locks	16	"
	at 3 "	9	"
Breadth of Canal at bottom		80	"
Breadth of Canal at water surface		120	"

Ocean vessels ascend the St. Lawrence as far as the City of Montreal, 986 miles above the Straits of Belle-Ile. Montreal City is situated on an island of the same name, formed by the junction of the Ottawa and the St. Lawrence. The island is 32 miles long by 10 miles broad, and the city lies on the south side of the island, near the middle of its length.

Immediately above Montreal City, we encounter the first serious rapids that bar the ascent of the river. They are known as the St. Louis Rapids (Sault St. Louis), and the necessity of surmounting them gave rise to the construction of the Lachine Canal. This canal lies on the Island of Montreal, and extends from the City to the village of Lachine. (See Diagrams Nos. II. and V.)

The first step taken towards the accomplishment of this work, was in the year 1815, when the Legislature passed a Bill granting its promoters a sum of money in aid of its construction, but nothing further was done till the year 1819, when the above mentioned Bill was repealed and another Bill was passed, incorporating a joint stock Company, with a capital of £150,000 ($600,000) in 3,000 shares.

In the month of January, 1821, this Company presented a petition to the House, setting forth that they had secured the services of a civil engineer from England, that he had been preparing surveys and plans for the Canal, from the time of his arrival in the previous spring, and that not more than one-half of the shares had been subscribed for. They prayed the Government to take stock in the undertaking.

This petition was referred to a Committee, and the result was the passage of a Bill on the 26th of May, 1821, repealing the Act under which the Company had been organized, and empowering the Government to construct the Montreal and Lachine Canal as a Provincial work. Commissioners were therefore appointed to superintend and carry out the design, and the plans and papers that had been prepared by the first Company were transferred to this Commission, together with the services of Mr. Thomas Burnett, the engineer. On the 17th July, 1821, ground was broken at Lachine.

It has been often asserted that the lower entrance of the Lachine Canal is too high up the river, and too near the foot of the rapids, and that a swift current had to be overcome before it could be reached and entered. It is urged that, if the Canal had been extended to some 2½ miles below its present terminus, that is to say, to the foot of the Current Ste. Marie, it would then have opened into a fine sheet of still water, and consequently that the whole Port of Montreal, instead of lying, as it now does, in a current which is almost a rapid, would have possessed a more eligible position.

The first projectors of the Canal had intended to place the terminus at the foot of the Current Ste. Marie, with a branch running from the main line to a point in the river near the present entrance, but the prices asked for the land were, at the time, considered so exorbitant that it was deemed necessary to change the location.

The importance of continuing the Canal to the lower terminus was, however, so apparent, that two years later, viz: in 1823, an Act of Parliament was obtained, directing that measures should be taken to ascertain the value of the land required; in obedience to this Act, the Canal Commissioners appointed Messrs. Julius Quesnel and Thomas Phillips, commissioners to obtain the required information.

These gentlemen reported that the proposed extension would pass through eighty-seven different properties; that the value of the land amounted to £12,547 ($50,188), and the value of the houses to £3,821 ($15,284), making in all £16,368 ($65,472). They strongly urged the purchase of the land, with a view to the future extension of the canal; but this suggestion, however, was not carried out.

The canal, as then built, was 8 miles and 718 yards in length, the breadth at bottom 28 feet, at water surface 48 feet in earth, and 36 in rock, with 5 feet depth of water.

There were seven locks of cut stone, 100 feet long, 20 feet wide in the clear, and of a depth sufficient for vessels drawing 4½ feet of water.

The Canal was opened in August, 1824, from Lachine to the outskirts of the City of Montreal, and in 1825 vessels were for the first time passed through.

The total expenditure on this work, from its commencement to the end of 1826 was £109,601 0s. 9d. ($438,404.15), Canada currency.

The funds were furnished by the Government of Lower Canada, with the exception of £10,000, contributed by the Imperial Government to secure the free passage of H. M. troops, stores, &c.

On 31st December, 1839, Lieut. Col. Phillpotts, acting under instructions from His Excellency the Earl of Durham, reported on the canal navigation of the Canadas. The dimensions of the locks proposed by Col. Phillpotts, for all the canals between tide water and Lake Erie, were those which had been adopted for the Cornwall Canal, viz: 200 feet in length, by 55 in breadth, and 9 feet water on the sills. Between Montreal and Lachine he proposed a new line of canal, commencing at Leishman's Point about half-a-mile above the upper entrance of the present canal; thence running in the rear of the village of Lachine, crossing the road leading to Montreal, a short distance from the foot of the hill, and touching the old canal at a point about four miles from Lachine:—thence, continuing still on the north side of the old canal, on a line generally parallel with it until near Montreal where it fell into the old line. Col. Phillpotts estimated the cost of these proposed works at £324,600 stg., ($1,579,720).

In 1841, immediately after the union of the Provinces of Upper and Lower Canada, the engineers of the Department of Public Works, then called the Board of Works, made estimates of all the works required on the Canals, to accommodate lake-going vessels, between Quebec and Lake Huron; and after deliberating on the expediency of adopting a new location for the Lachine Canal, they ultimately came to the conclusion to retain the old one.

The dimensions for tho proposed enlargement were, 200 feet by 45 feet for the locks, with nine feet water on the sills; width of canal at bottom, 80 feet, and at water surface, 120 feet; length, as before, 8½ miles; number of locks, 5, and entire lockage, 44¾ feet.

The enlargement was commenced in 1843, but in 1844, while the works were being carried on, (urgent representations having been made by the Board of Trade of Montreal, and by the mercantile interests generally,) locks 1 and 2 were deepened to 16 feet of water on the sills, so as to admit the largest sea-going vessels which then visited Montreal, into the first basin of the canal.

The enlarged canal was opened in the spring of 1848.

In 1847 it was decided that the surplus water in the canals should be leased to manufacturing establishments, and between that year and the 5th August, 1860, water power (described in the leases granted, as sufficient to drive 104 runs of mill-stones,) was let out to various parties. (*See detailed statement of leases of water-power and other property in Appendix No.* 25, *pages* 288 to 312.)

The propriety of leasing the surplus water of the Canals is questionable. It has been urged in its favor, that manufactures are, by this means, placed in immediate connection with the navigable waters, that it is a great advantage to mill owners to find ready to their purposes, an available water-power; and that it gives, at once, a direct revenue to the Government, in the shape of rent, as well as an indirect revenue arising from the increased general prosperity.

Admitting these advantages, there are, on the other hand, certain drawbacks. One of the greatest of these is the increased current created in the canal, and the consequent inconvenience to vessels passing through. This inconvenience is so much felt at the present time, that the evil far outweighs all the advantages—yet how much more must it be as the traffic through the canal increases.

The facilities afforded to commerce by Mills and Factories, so situated on Canal Basins or Docks as to be accessible to shipping, is undeniable; but it is equally clear that it is most desirable that the water-power should be drawn from other sources than the Canal itself, except in places where the quantity of water required is too limited to make it of any importance from what source it is derived. Arrangements for furnishing this supplementary water-power could be made with more or less facility on nearly all the St.Lawrence canals; but nowhere is the execution of works on a large scale to effect this object of such paramount importance as at Montreal, owing to the commanding position of this centre of commerce, forming, as it does, the connecting link between the Ocean and Lake shipping, besides being—with the aid of the Victoria bridge—the grand junction of our railway system.

It may be questioned whether it would be a judicious proceeding on the part of the Government to enter upon the construction of such works as would be required to bring into use any extensive portion of the water-power afforded by the St. Louis Rapids, so as to apply it to the mills situated on either side of the canal or other navigable basins; but, beyond all doubt, it is a matter of general interest that the land required for such works should be at once secured, while it is yet unoccupied, for in a very few years the opportunity for taking such a step may be lost.

In close connection with this subject, it is deemed advisable to allude to the necessity of immediately adopting some comprehensive and well-digested scheme of a general terminus for our canal system; indeed, of such importance does this subject appear, that it may not be out of place to reproduce and commend earnestly to Your Excellency's attention the following extracts from the Report for the fiscal year ended 30th June, 1864.

"It is not proposed to discuss here, whether the time has arrived—either for the Government or for private companies—to enter at once upon the construction of a grand terminus for our canal system; but it is necessary, absolutely, to recognise that the time has fully arrived for the preparation and adoption of such a well-matured design, and on such a scale as the development of our commerce has shewn to be imperatively demanded."

"The great consideration of such a terminus is, that ocean vessels, lake boats, railway carriages, elevating warehouses, flouring mills and general wharfage, should all be in convenient communication with each other. To the proprietors of vessels, facilities for loading and unloading, insuring celerity and dispatch, are even of greater importance than the mere reduction, or the entire removal, of tolls."

"The disadvantages to the commerce of the country from the want of some well-digested scheme of this description are very serious. Railway companies are requesting, from the Government, permission to cross the canal or to occupy lands; private companies are applying for sites for warehouses, elevators and mills, or for permission to excavate basins; while the ship-builder is, year by year, demanding dry docks. But, in the absence of some systematized plan, many of these applications are refused, under the vague apprehension that such works may interfere with future enlargements, and structures are allowed to be erected which may ultimately become obstructions, to be removed only at a great expense."

"The design, therefore, of a terminus should embrace a revision of the whole plan of the Lachine Canal and the Montreal Harbor, with its connections, and the greatest facility should be given to the railways to have access everywhere. It does not follow that the proposed works should be executed at once, or that the Government should go into the building of harbors or railways, or warehouses, or mills; but the adoption of such a plan as has been alluded to, would give a unity to the operations of the various commissions and companies, as well as to individual citizens, and would ensure great economy in the whole conduct of our commerce."

It has often been suggested that the St. Lawrence Canals should be deepened, and in 1860, the Chief Engineer of the Department, acting under instructions from the Commissioner, reported that the cost of deepening the Lachine Canal to 10½ feet of water on the mitre-sills of the locks, and to 11½ feet in the levels between them, would be $446,000.00. In this estimate was included the cost of widening a rock cutting of about ¾ of a mile in length, from 55 to 100 feet, near the upper end of the canal. The widening of this cutting to 100 feet was executed in the years 1861 and 1862.

For statement of expenditure by the Department on the construction of this Canal, since the Union in 1841 up to the 30th of June, 1867—see Appendix No. 1, at page 3.*

For statement of annual expenditure for repairs and working expenses on this Canal, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 328.

For statement of the water power and other property leased on this canal—see Appendix No. 25, pages 288 to 292.

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*The statements given in the Appendix at page 3, show the actual expenditure by the Department on the construction of the Public Works of the Province since the Union in 1841; but they do not embrace certain sums, such as expenditure by the Government on the works previous to the Union, loans, purchase of stocks from Companies who had commenced the works, &c.

The absolute cost of the Works can only be arrived at by consulting the Parliamentary Records and the books of the local Commissioners under whom they were conducted before the Union; and by referring to the ledgers of the Finance Department since the Union.

The amounts expended by the Department of Public Works on the construction of the Lachine, Beauharnois, Cornwall and Williamsburgh Canals, from the Union to the 30th June, 1867, are as follow, viz :—

On the Lachine	$2,149,128.70
" Beauharnois	1,611,424.11
" Cornwall	467,301.70
" Farran's Point, Rapide Plat and Galops Canals, known as the Williamsburgh Canals	1,320,655.54
General Expenditure	116,821.31
	$5,665,331,36

The total cost of these works since their commencement, as shown by Appendix No. 70 at page 482, amounts to $7,569,586.50. This sum includes the following, viz:—

Outlay from the funds of the Provincial Government, before the Union	$1,846,942.52
Amount granted by the Imperial Government, and spent before the Union, on the Lachine Canal	40,000.00
Expenditure through the Department of Public Works, since the Union	5,665,331.36
Payments made for land claims since the Union, by the former Commissioners of the Cornwall Canal	17.312.62
Total up to 30th June, 1867	$7,569,586.50
In the ledgers of the Finance Department, the amount charged against these canals is kept under the head of "St. Lawrence Canals," and up to the 30th June, 1867, the total amount under this account, since the commencement of the works is	$7,431,208.04
To this sum should be added :	
Outlay before the Union not charged in the Public Accounts	86,552.22
Grant from Imperial Government expended before the Union on the Lachine Canal	40,000.00
Amount deducted in the Public Accounts for land sales, &c.	11,826.24
Total	$7,569,586.50

For a detailed description of the present condition of the works—see Appendix No. 3, pages 12 to 21, and 39 to 44.

For a description of the works executed on the canal during the year ending the 30th of June, 1867—see Appendix No. 30, pages 332 and 333.

For depth of water on sills of locks at upper and lower entrance of canal—see Appendix No. 46, pages 374 and 375.

For dates of opening and closing of navigation—see Appendix No. 47, at page 394.

For dates of opening and closing of navigation on Erie Canal—see Appendix No. 47, at page 400.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For produce received at Montreal by way of St. Lawrence Canals—see Appendix No. 50, at page 420.

For quantity of flour manufactured on the Lachine Canal—see Appendix No. 51, at page 422.

For proclamations respecting tolls and regulations on this canal—see Appendix No. 55, at page 432.

BEAUHARNOIS CANAL.

Length of Canal	11¼	statute miles.
Number of locks	9.	
Dimensions of locks	200	feet × 45 feet.
Total rise of lockage	82½	"
Depth of water on sills	9	"
Breadth of Canal at bottom	80	"
Breadth of Canal at water surface	120	"

The distance from the head of the Lachine Canal, across Lake St. Louis, to the foot of the Beauharnois Canal, is 15¼ miles.

The Beauharnois Canal connects Lake St. Louis with Lake St. Francis. (See Diagrams Nos. II. and V.)

In the distance overcome by this canal there are three rapids; the first met with, in ascending the river, is called "The Cascades," the second "The Cedars," and the third "The Côteau."

The rapids themselves only occupy a distance of about seven miles, and the two intermediate spaces are tranquil and easily navigated.

This Canal lies on the South side of the St. Lawrence, and does not follow the bank of the river, but runs some distance inland.

Previous to the construction of the Beauharnois Canal, the navigation between Lake St. Louis and Lake St. Francis was effected, during a long period, by means of four short canals. Three of these were built to avoid the cascades, and were located on the north side of the St. Lawrence, at the "Faucille," the "Trou du Moulin," and at "Split Rock." No Canal was required at the Cedars. The fourth was made to overcome the rapids at the Côteau. The locks of these canals were of cut stone, they had a breadth of six feet, and a depth of two and a half feet of water on the sills, and were designed for the passage of boats capable of carrying 30 barrels of flour.

In 1804, the locks at "Split Rock" and "Côteau du Lac" were restored, and a new canal nearly half-a-mile in length was constructed at the foot of the Cascades rapids, instead of the old French locks at the "Faucille" and the "Trou du Moulin." In 1817, the locks were enlarged from 6 to 12 feet in breadth, and the depth of water on the sills was increased from 2½ to 3½ feet, so as to admit "bateaux" and Durham boats of a larger size, capable of carrying 100 barrels of flour.

In 1833 the Government of Lower Canada appointed Commissioners to consider all matters relating to the navigation of the St. Lawrence, between Lachine and Cornwall. These Commissioners employed as their engineer Mr. J. B. Mills, who had been previously employed by the Upper Canadian Government in making surveys on the Upper St. Lawrence.

In 1834, Mr. Mills recommended that canal navigation should be established on the North shore of the St. Lawrence, and submitted for the consideration of the Commissioners, three different schemes based on the dimensions adopted for the Cornwall Canal, namely,—100 feet wide at bottom, and locks 200 by 55 feet, with nine feet of water over the sills. His first plan proposed short canals at the "Cascades," "Cedars," and "Côteau," using the St. Lawrence between the canals. According to this plan, the whole length of the improvement would have been 14⅝ miles, of which 7¾ would have been by river, and 6⅞ by canal; the whole descent would have been 82½ feet, of which 9½ were to have been overcome by the river and 73 by nine locks of various lifts; the estimated cost of this first route was £235,782 ($943,128). Mr. Mills' second plan proposed to carry the canal in a similar direction to the first, but more inland, so as to furnish a continuous canal through the whole length; the descent was the same as the first, but requiring 10 locks. The estimated cost was £324,943 ($1,299,772). By his third plan he proposed a communication descending from Lake St. Francis into the Lake of the Two Mountains, on the Ottawa river; the length of this canal was to have been 13½ miles, with a descent of 78⅓ feet, requiring 10 locks, thence through the Lake of Two Mountains to the navigable waters of Lake St. Louis, a distance of 3⅝ miles, thus giving an entire distance by this route of 17¾ miles, of which 14⅒ miles, was by canal with 11 locks, at an estimated cost of £442,762 ($1,771,048). He stated, that in order to present a complete view of the question, he had visited the South side of the river, and had passed over the country from Lake St. Francis to Beauharnois on Lake St. Louis, but without instruments, and that, geographically considered, a line on the North side of the St. Lawrence, would appear to him to be the most direct between these two waters. He recommended the first of the above-described plans—using the river, with short canals round the rapids; his report was referred to a Special Committee of the House, who approved of it, and recommended a grant of £240,000 ($960,000): it was afterwards brought up in Committee of the whole, from which it seems never to have emerged.

In 1834, a Report by Alex. Stevenson was presented to Parliament, in which he stated that he had made a survey of a connection between Lake St. Louis and Lake St. Francis, by means of the River St. Louis, which empties into Lake St. Louis at Beauharnois, connecting the head of the river with Hungry Bay on Lake St. Francis; and found that the distance by this route was increased to 25 miles, owing to the sinuosities of the river; that the total cost of the canal would be £62,557 ($250,228), and that it would afford a passage to boats drawing five feet water.

In 1835, Messrs. Stevenson and Baird, engineers, employed by Mr. Brown, agent for the Seigniory of Beauharnois, prepared two plans for a canal on the South side of the St. Lawrence. One plan, like that of Mr. Stephenson's in 1834, proposed to follow the valley of the St. Louis river. The canal was to be 15¾ miles long, 100 feet wide at bottom, 140 feet wide at water surface; with locks 200 × 55 and 9 feet depth of water on the sills; the estimated cost amounted to £194,800 ($779,200). The other plan proposed an inland route 12 miles long; 100 feet wide at bottom, 140 feet wide at water surface; the estimated cost amounted to £224,444 ($897,776).

These plans were both submitted to Parliament in 1835, but with the exception of a survey of Lakes St. Louis and St. Francis, made by Mr. Thompson and Mr. Larue, nothing further seems to have been done by the Provincial Government in connection with these works up to the time of the Union.

In 1839, Lt.-Col. Phillpotts, in his Report to the Imperial Government on the Canal Navigation of the Canadas, already alluded to, reviewed the various lines proposed. He admitted that it was probable that a canal on the South shore of the St. Lawrence, between Lakes St. Louis and St. Francis, would cost less than one on the North shore, but for military reasons advised that it should be placed on the north side of the river. He approved the original plan proposed by Mr. Mills, of using the river between the rapids, with three short canals, and gave it as his opinion, that to construct them in a proper and substantial manner, with locks 200 feet long by 55 feet broad, and 9 feet water on the sills, would cost £374,300 stg., ($1,821,593.33).

In 1841, when the Provinces of Upper and Lower Canada were united under one Government, we find in the memoranda submitted by the Board of Works, that a sum of £255,900 ($1,023,600) would be required to construct a canal to avoid the "Cascades" "Cedars" and "Côteau" rapids.

This estimate was based upon the design made by Mr. Mills in 1834, for 3 short sections of canal, on the North side of the river.

We find, however, that on the 17th of February, 1842, the chief engineer of the Board of Works, reported that he had examined the various lines of canal proposed on both sides of the river, and that the inland route on the south shore, which had been proposed by Mr. Stevenson in 1835 (as above described), was a very judicious one, and offered many advantages over the others. He stated that the canal, if built on the South shore, would be shorter than if made on the North shore, that it would be above and independent of all water courses, and that consequently it would not require any waste weirs, that it would be navigated two or three weeks longer every season than the one proposed for the north side, that the repairs and superintendence would be less, that the lock foundations would be chiefly rock, and that its cost would not be so great.

The question as to whether the canal should be on the North or South shore of the St. Lawrence was thoroughly discussed, and the opinions of many professional men and others were received before a special committee appointed by the House of Assembly; but the Committee rose on the 12th October, 1842, without reporting any decision.

In the summer of 1842, the surveys and plans necessary to the construction of the canal, on the route proposed by Mr. Stevenson, were prepared by the engineer of the Board of Works, and in the autumn of that year, contracts were entered into, for its execution.

The works of this canal were completed before the close of navigation in 1845.

Shortly after its completion its upper entrance was reported as imperfect, the channel leading to it being crooked, with only eight feet water during the dry season; it was also reported that the current in that part of the river ran at the rate of four miles an hour. and not in a direct line with the channel, but in some places crossing it, so that vessels were liable to be driven aground.

To remedy this, two dams were built, the one, 627 feet in length, extending from the main shore to "Grande Ile," and the other, 792 feet in length from that island to "Ile aux Chats;" these dams were closed in 1849 and were completed in 1850.

In 1852, 1853 and 1854, regulating weirs were constructed at each of the locks.

A dyke of about five miles in length, intended to prevent the flooding of certain lands lying on the south shore of Lake St. Francis at the head of the canal, was completed in 1856.

The residents on the banks of Lake St. Francis, complained that the dams built at the head of the Canal caused their lands to be flooded, and have on various occasions since, claimed and received compensation.

The cost of increasing the depth of water in this canal to 10½ feet on the sills of the locks and to 11½ feet in the reaches between them, was, in 1860, estimated by the Chief Engineer of this Department, at $150,000.

For statement of expenditure by the Department on this canal, up to the 30th of June, 1867—see Appendix No. 1, at page 3. See also note at the foot of page 11 of this report, under Lachine Canal.

For statement of annual expenditure for repairs and working expenses on this canal, from 1st January, 1860, to 30 June, 1867—see Appendix No. 28, at page 328.

For expenditure on this canal before and since the Union, from Government funds —see Appendix No. 70, at page 482.

For statement of the water-power and other property leased on this canal—see Appendix No. 25, pages 292 and 293.

For a detailed description of the present condition of the works—see Appendix No. 3, pages 21 to 28, and pages 45 to 47.

For a description of the works executed on this canal during the year ending the 30th of June, 1867—see Appendix No. 30, pages 333 and 334.

For depth of water on sills of locks at upper and lower entrance of canal—see Appendix No. 46, pages 376 and 377.

For dates of opening and closing of navigation—see Appendix No. 47, at page 394.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls &c., for 11 years between 1857 and 1867—see Appendices Nos. 63, 64, pages 454, to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this canal—see Appendix No. 55, at page 432.

CORNWALL CANAL.

Length of Canal	11½	statute miles.
Number of locks	7.	
Dimensions of locks	200	feet × 55 feet.
Total rise of lockage	48	"
Depth of water on sills	9	"
Breadth of Canal at bottom	100	"
Breadth at water surface	150	"

The distance from the head of the Beauharnois Canal through Lake St. Francis to the foot of the Cornwall Canal is 32¾ miles.

The Cornwall Canal extends from the town of Cornwall to the village of Dickinson's Landing, 11½ miles further up the river. It follows the northern shore of the St. Lawrence and overcomes the Long Sault Rapids. (See Diagram No. II.)

As early as 1816, the attention of the Parliament of Upper Canada, was drawn to the desirability of employing some person qualified to make surveys of the different routes of inland navigation, between Lakes Erie and Ontario, and between Lake Ontario and Lower Canada; and, in 1817, the Governor, in his speech at the opening of the Session, on the 2nd of February, urged that the water communication below Prescott deserved the serious consideration of Parliament.

In 1818, the attention of the Lower Canadian Government having been called to the subject, a joint Commission, consisting of Messrs. Thomas Clark and James Crook for Upper Canada, and Messrs. George Gordon and Joseph Papineau, for Lower Canada, was appointed. They reported that improvements were necessary between Montreal and Lachine, between the head of Lake St. Louis and Lake St. Francis, and also at the rapids above Lake St. Francis.

They recommended that Canals should be built of such dimensions as to be not less than 40 feet in width at the water surface, 28 feet at the bottom, and of 4 feet depth; and also that the locks should be not less than 90 feet long by 12 feet breadth in the clear.

The cost of the works was estimated at $600,000. The attention of the Legislature was drawn to this subject in 1822-'23, and '25. In 1826, in answer to a petition from both Houses, praying that a report be obtained from an engineer, showing what would be the cost of canals capable of passing schooners drawing 7½ feet of water.—His Excellency the Governor was pleased to transmit a report on the subject made by Mr. Samuel Clowes.

This report stated that the length of the proposed Canals between Lakes Ontario and St. Francis, would be about 13 miles, with 11 locks, averaging 6 feet lift; that the cost, if constructed with a depth of 8 feet water, with locks 132 feet long by 40 feet wide, would be £176,378 ($705,512); and for Canals with a depth of only 4 feet, with locks 100 × 15 feet, £92,834 ($371,336). The report further stated that the cost of transportation, in those days, from Montreal to Prescott, a distance of 119 miles, was £4 ($16) per ton, and thence to Niagara, £2 ($8) per ton.

This question of inland navigation was agitated in various ways until 1830. Another examination was made in that year by Mr. Barrett, who reported that all the obstructions which existed to the navigation, between Lake St. Francis and Lake Ontario might be removed so as to allow the passage of Durham boats drawing four feet water for the sum of £45,198 ($180,792), and of steamboats and schooners for the sum of £173,648 ($694,592).

In 1832 the House of Assembly resolved, "That the public interest requires that the navigation of the River St. Lawrence should be improved, so as to admit of navigation by vessels drawing 9 feet water, and that it is expedient to commence such improvements with as little delay as practicable, between Cornwall and the head of the Long Sault Rapids," and accordingly a Bill was passed, appropriating the sum of £70,000 ($280,000). In 1833 a commission was appointed to carry out this project; Mr. Benjamin Wright was employed as principal engineer, and Mr. John B. Mills as his assistant.

One of the conditions of the Act was, that the Cornwall Canal should be commenced and finished, before any of the other projected works, leading to Lake Ontario, should be undertaken.

Mr. Wright was also employed, by the Government of Lower Canada, to make the survey of the lower Canals, on a scale which would correspond in every way with the canals surveyed for Upper Canada.

In 1833, these engineers reported that the following Canals were necessary for establishing a communication between Lakes St. Francis and Ontario, viz:—

PROPOSED CANAL.	No. of Locks.	Lift of Locks In feet.	Length.	Estimated Cost.		
				£	s.	d.
Long Sault (Cornwall Canal)........	6	48	11½ miles.	194,903	3	3
Farran's Point..	1	4	4000 feet.	23,860	10	1
Rapide Plat	1	11½	3 9/10 miles.	46,352	11	3
Pointe Cardinal..	1	2½	1500 feet.	12,148	10	0
Les Galops..	1	4½	2400 feet.	14,277	19	0
				291,542	13	7
Contingencies........................	....	....	....	32,073	8	3
Total.......................	....	....		£323,616	1	10
				$1,294,464.37		

Adding to this the cost of the land, the estimate was stated to be in round numbers £350,000 ($1,400,000). The engineers further reported that, by the Act under which they had been instructed to conduct the survey, it was enjoined that the locks should not be less than 55 feet wide, nor less than 150 feet long, with 9 feet of water on the mitre sills. The engineers determined that locks of 55 feet width should be 200 feet long between the gates, in order to obtain proper proportions, and that these would admit a vessel of 175 to 180 feet of extreme length; that following the proper proportions for locks 55 feet wide, those canals in which steamboats were expected to pass each other, as at the Long Sault should be 100 feet wide at the bottom; but that for the improvements proposed at the four several places above the Long Sault, where vessels would only use the canals when going up, and run the rapids when going down, the breadth of the canals should be only 50 feet at bottom, and that in all cases the banks should be 2 feet base to 1 perpendicular, so that the water line at the top of the canal at Long Sault would be 140 feet in breadth, and at all other places 90 feet. The scale of navigation suggested by these engineers was adopted and approved by the Legislature.

The Commissioners appointed to superintend the works, secured the services of Mr. Benjamin Wright, as Consulting Engineer, and of Mr. J. B. Mills as Resident Engineer. The professional services of Captain Cole, Royal Engineers, and of Messrs Geddes and Fleming, were also retained.

Tenders were received on the 6th of July, 1834, and the works undertaken, at various rates; but in 1835, the price of labor and provisions had risen so high that the Commissioners were induced to add 10 per cent to the prices agreed upon with the contractors; and in 1836, owing to the same causes, the additional allowance was increased to 30 per cent.

In 1836, Mr. Mills, the Resident Engineer, resigned, and Capt. Phillpotts, R. E., was appointed in his stead.

The years 1837, '38 and '39, were years of great financial embarrassment to the Canal Commissioners. The causes of these difficulties, were stated to be the exorbitant demands for damage to property.

In 1838 the works were suspended, and in 1839 and '40 the Commissioners reported that, in the absence of any immediate prospect of their being resumed, they had been compelled to discharge several officers connected with the Engineers' department, retaining only the Resident Engineer and Secretary.

Lieut.-Col. Phillpotts, R. E., in his General Report of 1839, on the Canal Navigation of the Canadas, estimated the cost of completing this canal at £57,300 stg. ($278,860).

At the date of the Union of the Provinces of Upper and Lower Canada, it was ascertained that the expenditure on this canal, up to the 31st December, 1838, amounted to £354,203 2s. 1d. ($1,416,812.41), and that a further sum of £57,671 6s. ($230,685.20), was required to complete the works; and that up to the day when the United Parliament met in Session, the total expenditure had been £362,134 11s. 10d. ($1,448,538.37).

The works were resumed in 1842, under the direction of the Department of Public Works of the United Provinces of Canada, and in the month of December of the same year, the steamboat "*Highlander*" passed through the canal. Several works, however, still remained to be completed, and the canal was not formally opened until the month of June, 1843.

In 1860, the Chief Engineer of the Department of Public Works, in obedience to instructions given him, reported that on the mitre sills of certain locks in this canal, there was occasionally less than 9 feet of water; and he submitted an estimate showing that the cost of deepening this canal to a depth of 10½ feet on the mitre sills and 11½ feet in the levels between them, would be $250,000, and expressed an opinion that if the works were placed in the hands of energetic contractors, they could be executed during the winter and spring, without serious interruption to navigation.

With the exception of supply and regulating weirs, at the head of the Canal and at each of the locks, no works of very great importance have been executed on this canal since its completion.

For statement of expenditure by the Department on this canal, up to the 30th of June, 1867—see Appendix No. 1, at page 3. See also note at the foot of page 11 of this report, under Lachine Canal.

For statement of annual expenditure for repairs and working expenses on this Canal, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 328.

For expenditure on this canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 482.

For statement of the water-power and other property leased on this canal—see Appendix No. 25, pages 294 and 295.

For a detailed description of the present condition of the works—see Appendix No. 4, pages 48 to 53.

For a description of the works executed on this canal during the year ending the 30th of June, 1867—see Appendix No. 31, at page 341.

For depth of water on sills of locks at upper and lower entrance of Canal—see Appendix No. 46, pages 378 and 379.

For dates of opening and closing of navigation—see Appendix No. 47, at page 394.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

THE FARRAN'S POINT CANAL.

Length of Canal		¾ mile.
Number of locks		1.
Dimensions of locks	200 feet ×	45 feet.
Total rise of lockage		4 "
Depth of water on sills		9 "
Breadth of Canal at bottom		50 "
Do. at water surface		90 "

The three following canals, viz., the Farran's Point, the Rapide Plat, and the Galops, are also known under the collective name of the "Williamsburgh Canals."

From the head of the Cornwall canal to the foot of Farran's Point Canal the distance on the River St. Lawrence is 5 miles.

This canal extends from the foot to the head of the rapids at Farran's Point, and is used principally by vessels ascending. Vessels descending do not enter the canal, but run the rapids with ease and safety. It lies on the north side of the river. (See Diagram No. II.)

The construction of a canal at this point had been discussed, and preliminary surveys were made, previous to the commencement of the Cornwall Canal by the Government of Upper Canada.

In 1833, Mr. Benjamin Wright reported that he had made a survey of the proposed canal, and, for the reason that it would only be used by ascending craft, he proposed that its breadth need only be 50 feet at bottom, with a lock of 4 feet lift, 100 feet long by 55 feet wide.

In the Report by Lieut.-Col. Phillpotts, R. E., the cost of this work was estimated at £48,000 stg., ($233,600).

The actual construction of the canal was not commenced until 1844, after the Union of the Provinces of Upper and Lower Canada, and was completed in October, 1847. The breadth of the locks was fixed at 45 feet.

In 1860, the Chief Engineer of this Department estimated the cost of deepening this canal to 10½ feet on the mitre sills and 11½ feet in the reaches, at $25,118.

The expenditure by the Department on the "Farran's Point, the Rapide Plat, and the Galops Canals, is kept under an account headed, the "Williamsburgh Canals." See note at the foot of page 11 of this report; also Appendix No. 1, at page 3.

For statement of annual expenditure for repairs and working expenses on this Canal, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 328.

For expenditure on this Canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 482.

For statement of the water-power and other property leased on this canal—see Appendix No. 25, pages 296 and 297.

For a detailed description of the present condition of the works—see Appendix No. 5, pages 53 to 55.

For a description of the works executed on this Canal for the year ending the 30th of June, 1867—see Appendix No. 32, pages 342 and 343.

For depth of water on sills of locks at upper and lower entrance of Canal—see Appendix No. 46, at page 380.

For dates of opening and closing of navigation—see Appendix No. 47, at page 395.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For quantity of flour manufactured on Canal—see Appendix No. 51, at page 422.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

THE "RAPIDE PLAT" CANAL.

Length of Canal	4	miles.
Number of locks	2	
Dimensions of locks	200	feet × 45 feet.
Total rise of lockage	11½	"
Depth of water on sills	9	"
Breadth of Canal at bottom	50	"
Breadth at surface of water	90	"

The distance from the head of Farran's Point Canal to the foot of the Rapide Plat Canal, following the channel of the St. Lawrence, is 10½ miles.

This Canal extends from Morrisburgh to the head of the swift current, and overcomes the "Rapide Plat" rapids. It is used by ascending craft only, as the descending vessels run the rapids safely. This Canal is on the North shore. (See Diagram No. II.).

Three different lines had been proposed for this canal. The first by Mr. Clowes, in 1826, which was to commence at a point near the mouth of Monk's (Campbell's) creek, then passing in the rear of Mariatown, was to follow Sawyer's creek for about half a mile, to its mouth.

The second was proposed by Mr. Barrett, in 1830, to run more inland than that proposed by Mr. Clowes. The third line was proposed by Messrs. Wright & Mills, in 1833, and followed the river's edge for a distance of $3\frac{9}{10}$ miles, and its upper terminus was at the mouth of Sawyer's creek. Lieut.-Col. Phillpotts' report approved this latter plan and estimated the cost of the works at £120,000 stg. ($584,000).

Nothing, however, was done towards its construction until after the union of the Provinces of Upper and Lower Canada. In 1843 surveys were made, and the works were commenced in the spring of 1844.

The proposed breadth of 55 feet for the locks was reduced to 45 feet.

The Chief Engineer of this Department, reporting in 1860, on the cost of deepening the St. Lawrence Canals, so as to give 10½ feet of water on the mitre sills and 11½ feet of water in the reaches between the locks, estimated the cost of deepening this canal at $75,615.

The expenditure by the Department on the Farran's Point, the Rapide Plat, and the Galops Canals, is kept under an account headed, the "Williamsburgh Canals." See note at the foot of page 11 of this Report; also Appendix No. 1, at page 3.

For statement of annual expenditure for repairs and working expenses on this Canal, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 328.

For expenditure on this Canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 482.

For statement of the water-power and other property leased on this canal—see Appendix No. 25, pages 296 and 297.

For a detailed description of the present condition of the works—see Appendix No. 5, pages 53 to 55.

For a description of the works executed on this Canal during the year ending the 30th of June, 1867—see Appendix No. 32, pages 342 and 343.

For depth of water on sills of locks, at upper and lower entrance of Canal—see Appendix No. 46, at page 381.

For dates of opening and closing of Navigation—see Appendix No. 47, at page 395.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices No. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For quantity of flour manufactured on Canal—see Appendix No. 51, at page 422.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

THE GALOPS CANAL.

Length of Canal	7⅝	miles.
Number of locks	3.	
Dimensions of locks	200	feet × 45 feet.
Total rise of lockage	15¾	"
Depth of water on sills	9	"
Breadth of canal at bottom	50	"
Do. do. at surface of water	90	"

From the head of the Rapide Plat Canal to the foot of the Galops Canal, the distance, following the St. Lawrence, is 4½ miles.

This canal avoids the Rapids at Pointe aux Iroquois, Point Cardinal and the Galops, and is on the north bank of the river. (See Diagram No. II.)

The construction of canals at these points was proposed long before the union of the Provinces.

In 1833, Mr. Benjamin Wright, the Engineer of the Cornwall Canal, surveyed these rapids, and recommended two short canals; namely, one at the Galops, 2,400 feet long with one lock of 4½ feet lift, and another at Point Cardinal, 1,500 feet in length, with a lock of 2½ feet lift, but nothing more was done before the Union.

Lieut.-Col. Phillpotts, R.E., approved of this plan of Mr. Wright's, and estimated the cost of the Galops at £29,500 stg. ($143,566.67), and the cost of Point Cardinal at £25,000. stg. ($121,666.67).

In 1843, the Department of Public Works of the United Provinces of Upper and Lower Canada, prepared a plan of canals for this section of the St. Lawrence navigation- The design consisted of a canal made to avoid the Iroquois rapids, 3 miles long, with one lock of 200 × 45, and of 6 feet lift. From the head of this canal the ascending boats again entered into the St. Lawrence, and, following its course upwards for 2⅝ miles, arrived at the foot of the Galops Canal, made to overcome the Galops Rapids.

This second canal, "The Galops," was 2¼ miles long, with two locks of 200 feet by 45 feet, and 8 feet lift. This design having been approved of, it was carried into execution. The works were commenced in 1844, and the Galops Canal was opened to the public in November, 1846, and the Iroquois Canal in September, 1847.

After a few years' experience it was found that the Point Iroquois Canal had not sufficient depth of water; and as this was a serious hindrance to vessels ascending, it was decided to raise the water in the Iroquois by connecting it with the Galops. The contract for this central section (known during the progress of the work as the Junction Canal) was given out in the autumn of 1851, and was completed in 1856.

These three canals, the Iroquois, Junction, and Galops, are now known under the collective name of the Galops Canal.

In 1860, the Chief Engineer of this Department, estimated that the cost of deepening this canal, so as to have 10½ feet of water on the sills and 11½ feet between the locks, would be $81,267, and that it could be executed without interruption to navigation.

The expenditure by the Department on the Farran's Point, the Rapide Plat, and the Galops Canals, is kept under an account headed, the "Williamsburgh Canals." See note at the foot of page 11 of this Report; also Appendix No. 1, at page 3.

For statement of annual expenditure for repairs and working expenses on this Canal, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 328.

For expenditure on this Canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 482.

For statement of the water-power and other property leased on this canal—see Appendix No. 25, pages 296 and 297.

For a detailed description of the present condition of the works—see Appendix No. 5, pages 53 to 55.

For a description of the works executed on this Canal during the year ending the 30th of June, 1867—see Appendix No. 32, pages 342 and 343.

For depth of water on sills of locks, at the upper and lower entrance of Canal—see Appendix No. 46, pages 382 and 383.

For dates of opening and closing of Navigation—see Appendix No. 47, at page 395.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For quantity of flour manufactured on the Galops Canal—see Appendix No. 51, at page 422.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

WELLAND CANAL.

MAIN LINE FROM LAKE ONTARIO TO LAKE ERIE.

Length of Canal	27 miles and 1,099 feet.
Pairs of guard gates	3
Number of lift locks	27
Dimensions of locks	2 locks of 200 feet × 45 feet. 24 " " 150 " " 26½ " 1 lock of 230 " " 45 "
Total rise of lockage	330 feet.
Depth of water on sills	10¼ "

WELLAND RIVER BRANCHES.

Length of Canal—Port Robinson Cut to Welland River	2,622 feet.
" from Welland Canal to Welland River, viâ Lock at Aqueduct	300 "
" —Chippewa Cut to Niagara River	1,020 "
Number of Locks, 1 at aqueduct and 1 at Port Robinson	2
Dimensions of Locks	150 ft. × 26½
Total Lockage, from Welland Canal down to Welland River	17 feet.
Depth of water on sills	9 ft. 10 in.

GRAND RIVER FEEDER.

Length of Canal	21 miles.
Number of Locks	2
Dimensions of Locks	1 of 150 × 26½ 1 of 200 × 45
Total rise of Lockage	7 to 8 feet.
Depth of water on sills	10¼ feet.

PORT MAITLAND BRANCH.

Length of Canal	1¾ miles.
Number of Locks	1
Dimensions of Lock	185 × 45 feet.
Total rise of Lockage	8½ feet.
Depth of water on sills	11 "

The distance from the head of the Galops Canal, following the channel of the St. Lawrence, and through Lake Ontario to Port Dalhousie, at the foot of the Welland Canal, is 236⅜ miles.

The main line of this canal extends from Port Dalhousie on Lake Ontario to Port Colborne on Lake Erie. (See Diagram No. III.)

The breadth of the main line of the canal varies as follows :—

SECTIONS OF CANAL.	Distance.	Breadth at bottom.	Breadth at surface.
	miles.	feet.	feet.
Dalhousie to Thorold	9⅙	70	110
Thorold to Allanburgh	3⅓	26	66
Allanburgh to Ramey's Bend	12⅕	50	90
Ramey's Bend to Port Colborne	1¾	58	58
Port Colborne to outer end of West Pier	¾	90	
Port Robinson to Chippewa, Welland River	8¾	....	200
Dunnville Branch	21	26	60 to 70
Port Maitland Branch	1¾	45	85

In its present condition, the main line of this canal is supplied with water by means of a feeder from Grand River.

The summit level on the main line extends from Allanburgh to Port Colborne, a distance of 14 miles, and its height is about 8 feet above Lake Erie ; so that, admitting the difference of level between Lakes Erie and Ontario to be 330 feet, the total up and down lockage on the main line would be 346 feet. The difference of level between the lakes varies at times. On the 14th of January, 1867, the difference of level between Port Dalhousie and Port Colborne was reported to be 324 feet 9 inches.

The Chippewa branch descends from the main line, into the Welland River at Port Robinson, by means of a lock ; vessels may, therefore, ascend the main line from Lake Ontario to Port Robinson, descend into the Welland River, run down 8¾ miles to the Niagara river, and, passing up that river, enter Lake Erie.

The main line crosses the Welland river over an aqueduct, and thus forms a barrier to vessels navigating that river. To remedy this, the Welland river, above the aqueduct, has been placed in communication with the main line of canal by a lock at the aqueduct, and the passage of craft down the Welland river is accomplished in the following manner, that is to say :—A vessel coming from the head of navigation on the Welland river arrives at the aqueduct, is lifted by the lock into the main line of canal, follows the main line from the aqueduct to Port Robinson, and then descends again into the Welland river, and continues its downward course.

The Grand River feeder, which supplies the water for the whole canal and its branches, is a navigable canal itself, being 26 feet wide at bottom, with a breadth at surface of water varying from 60 to 70 feet, and having a navigable depth of 8 feet. The head of the feeder is at Dunnville, in the Grand River, at which point there is a dam of 564 feet in length, retaining the waters of this river, and affording slack water navigation as far as Cayuga, some 16 miles up the Grand River, above Dunnville.

In the present condition of the canal the water in the feeder is level with the water of the summit reach on the main line ; but after the completion of the works now in progress, and which are necessary before the main line can be supplied with water from Lake Erie, there will be a lockage of 8 feet rising from the main line to the feeder at the junction

The Port Maitland branch descends from the navigable feeder to Port Maitland, at the mouth of the Grand River, one of the safest harbors on Lake Erie. The breadth at bottom of this section is 45 feet, and at the water surface 85 feet; navigable depth—9 feet.

It is thus shown that the Welland Canal communicates with Lake Ontario only at Port Dalhousie; while it communicates with Lake Erie at three points, viz., Port Colborne, Port Maitland, and Port Robinson, *viâ* the Welland and Niagara rivers.

Before entering on the history of the construction of this canal, it may be as well to state that the St. Lawrence—between Lakes Erie and Ontario—is known as the Niagara River—that the length of this section of the St. Lawrence is about thirty miles and that it runs almost direct from South to North. Port Dalhousie, on Lake Ontario, is about 11 miles west of the point where the Niagara river discharges itself into that lake, whilst Port Colborne, on Lake Erie, is 18 miles west of the upper end of the same river, and Port Maitland at the mouth of the Grand River, is 17 miles still further to the westward. Thus, it will be understood that the Welland Canal runs about north and south, that its line is nearly parallel with the Niagara river, and that it is from 12 to 15 miles west of it.

The Welland river flows from West to East, and, crossing the line of the canal discharges into the Niagara river at Chippewa, a village about 15 miles from Lake Erie, and about two miles above the Niagara falls.

The Welland is navigable for deeply-laden vessels for a distance of upwards of 40 miles from its mouth, and has scarcely any perceptible current.

The highest land on the line of the canal, or the point where the deepest cutting had to be made, occurs almost immediately north of the Welland river, between that river and Lake Ontario.

This deep cutting has been the point of difficulty with all the engineers and projectors of this canal; not on account of its depth, for the highest point is only 41 feet above Lake Erie; nor of its length, for it is under two miles; but on account of the tendency to slide of the soil through which the excavation is made.

One of the earliest steps taken in connection with the construction of this canal appears to have been a Report from a Joint Committee of both Houses of the Upper Canadian Parliament, on the subject of Inland Navigation, on the 27th of February, 1816; and the introduction of a Bill by Col. Nichol, on the 4th of March following, to appropriate a sum of money towards obtaining complete surveys of the different routes, or water communications, between Lakes Erie and Ontario, and between Lake Ontario and Lower Canada. The Bill had two readings, and was then referred to a Committee, from which it seems never to have emerged.

We also find, that in 1818 the inhabitants of Niagara petitioned for the formation of a canal between Lake Ontario and Chippewa on the Welland river.

The Committee to whom the petition was referred reported favorably, and suggested that if a Company were formed to carry out the project, it should be encouraged.

In 1819, provision was made by the Legislature for surveying the waters of the St. Lawrence, and, early in 1823, a Commission, which had been appointed in 1821, reported, recommending that the dimensions of the Welland Canal should be such as to accommodate vessels navigating the Lakes.

These preliminary proceedings had no other result than to cause a certain number of enterprising individuals to form themselves into a Company; and, on a Petition being presented to the Legislature by W. H. Merritt and others, this Company was incorporated in 1824, under the name of the Welland Canal Company.

They proposed to establish a line of communication by canal and railway.

The upper reach of the canal was to have been supplied with water from the Welland River, and was to have been carried by tunnel through the Ridge, which is now traversed by the Deep Cut; the descent of the slope was to have been effected by railway, and the remaining distance to Lake Ontario, by water, through the valley of the Twelve Mile Creek. The canal portion, which was only to have accommodated boats of less than 40 tons burthen, was to have been 4 feet deep by 7 feet wide at bottom, and 19 feet wide at water surface; the breadth of the locks was to have been 7 feet, and the capital of the Company £37,500 ($150,000).

It does not appear that the combined Canal and Railway scheme was at any time considered sufficient by the Company, for in the summer of 1824, immediately after their charter had been obtained, we find the Directors engaging Messrs. Hall and Clowes, British Engineers, and Mr. Roberts, an American Engineer, to explore the locality, and to revise the project.

These gentlemen examined several lines, and estimated the cost of a Boat Canal to be from £15,000 to £23,000, ($60,000 to $92,000); Mr. Hall giving an opinion that a small canal could be made in the first instance, to be used afterwards to transport the material necessary for the construction of a larger one, sufficient to accommodate schooners.

The ceremony of breaking ground was performed, without *éclat,* on the 30th November of that year (1824).

These several schemes were, however, almost immediately laid aside, and a projected line sufficiently large to admit schooners and sloops, was finally adopted by the Directors in 1825.

The entrance on Lake Ontario was to be at the mouth of the Twelve Mile Creek (Port Dalhousie), and the upper terminus at the Welland river. The locks were to have been constructed of wood, 110 feet in length by 22 feet in breadth, and the general cross section of the Canal was to be 26 feet at bottom, and 58 feet at the surface of the water, except through the Deep Cut, which for a distance of two miles, was only to be 15 feet at bottom; the depth of water proposed was 8 feet.

The canal was to be supplied with water from the Welland river—vessels passing from Lake Erie to Lake Ontario were to descend the Niagara river as far as the mouth of the Welland, thence ascend the river 8¾ miles to the Village of Port Robinson; thence entering the canal on a level with the Welland river 9 feet below the level of Lake Erie, they would cross the ridge through a deep cutting and afterwards descend to Lake Ontario by locks.

It was even at that early day admitted, that the passage of vessels down the Welland and up the Niagara River was highly objectionable, for the reason that the course was circuitous; and that the rapid current of the Niagara River would be a serious obstacle to the passage of loaded vessels. The Directors therefore contemplated to establish, at a future period, a less objectionable communication between the Welland River and Lake Erie.

The designs for these extensions were numerous. A favorite project contemplated that vessels should go up the Welland River to Fork Creek, about 11 miles above Port Robinson, thence ascend into a canal on a level with Lake Erie, and afterwards follow this canal for a distance of 14 miles to Port Maitland, at the mouth of the Grand River. Another project proposed by Mr. Clowes, consisted of a light cutting, from the Welland River to Lake Erie, with water at a level higher than the lake, supplied by a feeder from Grand River.

The estimated cost of the first section, from Lake Ontario to the Welland River, was about £180,000, ($720,000); and, in April, 1825, an Act was obtained, authorizing the Company to increase its capital to £200,000 ($800,000).

Subscription books were opened in the month of July following, and although very little more than a quarter of the stock had been subscribed, the Directors entered into contracts to the amount of £113,000, ($452,000), and the works were commenced in the summer of the same year.

The limited means of the Company were a continual source of embarrassment to the Directors, and almost every year they asked assistance, either from the Imperial Government or from the Provincial Governments of Upper and Lower Canada.

Thus, in 1826, the Company obtained from the Government of Upper Canada a loan of £25,000, ($100,000), for 3 years, and from the Imperial Government a promise of a contribution of £16,360 stg., ($79,618.67), or one-ninth of the estimated cost, on condition that the locks of the canal should be at least 22 feet broad, and that all vessels and boats, the property of the Imperial Government, and also other vessels carrying Government stores, should pass through the canal free of duty or toll.

In 1827, the Government of Upper Canada took stock to the amount of £50,000, ($200,000), and the Government of Lower Canada, £25,000, ($100,000), and the Imperial Government gave a grant of 13,000 acres of land, in the township of Wainfleet, in the vicinity of the canal. In 1828, the Company obtained a loan from the Imperial Government of £50,000, ($200,000), at four per cent. interest, for 10 years, on condition of surrendering the claim to the contribution of £16,360 stg., ($79,618.67), made in 1826.

The Contractors were pledged by their contracts to have the excavation of the Deep Cut and all the works between the River Welland and Lake Ontario finished by the 9th of April, 1827, but they were not completed at the specified time. In the summer of 1828, however, it was confidently expected that the water would be let into the canal in the autumn; but, unfortunately, only a few days before the excavation in the Deep Cut was expected to be completed, a slide of earth occurred there, which was so formidable in its extent that it led to the abandonment of the Welland River as a feeder. The funds of the Company at the time of this accident were so low, and the predictions of the failure of the Deep Cut, had been so numerous, that it was felt that unless some great change of design was adopted it would be difficult to obtain the funds necessary to renew the attempt to complete the work.

If the first plan was abandoned, the Directors had before them two other distinct courses.

The first was the adoption of the Erie level, commencing the canal at Gravelly Bay (now Port Colborne), opening a trench which would admit the waters of Lake Erie, continuing this trench through the ridge, and descending the slope to Lake Ontario by means of locks. This design involved the construction of 11½ miles of additional canal, and an expensive aqueduct over the Welland river, but it diminished the depth of the Deep Cut by 9 feet.

The second plan was the adoption of the Grand River as a feeder, retaining Port Robinson on the Welland river as the Upper terminus, and Port Dalhousie on Lake Ontario as the Lower terminus; double locks at each end of the Deep Cut, to keep the water there at a level of 15½ feet above the Welland river; water to be supplied by a feeder from the Grand River, distant 22 miles. This plan necessitated the construction of a feeder, 2 locks and an aqueduct, as additional works, but it diminished the depth of the cutting by 15½ feet.

This latter plan was adopted, and contracts were immediately entered into; but just as the works were being commenced the Naval authorities objected that the proposed dam across the Grand River was too near its mouth, and the Directors were compelled to select a station some 5 miles further up the river; this increased the length of the feeder to 27 miles.

Notwithstanding the financial embarrassments of the Company, the works were prosecuted with such vigor and energy that the Feeder was completed, and water let into the canal in the fall of 1829, and on the 30th of November, 1829 (the anniversary of the day on which the canal was commenced, five years before), two schooners ascended the canal from Lake Ontario to the Welland river. They were the "*Ann & Jane*," and the "*R. H. Boughton*," the one 85 tons burthen, and the other smaller.

The Directors, in one of their reports, give the following description of the canal:—

"Vessels drawing 7½ feet water, and not having more than 21½ feet breadth of beam, coming down from any port on Lake Erie with produce, will sail down the river Niagara until they approach about one-fourth of a mile from the mouth of the river Welland or Chippewa. There they will enter a canal which has been cut across a point of land into the River Welland, in order to avoid the difficulty and danger of descending the River Niagara so low as the mouth of the Welland. This cut is 15 chains in length. They will then pass up the River Welland, a distance of 9½ miles. This river affords admirable navigation for vessels of any burthen. From the Welland they will ascend two locks into the Deep Cut, from which point into Lake Ontario the distance is 16½ miles."

The feeder was 20 feet broad at the bottom, 40 feet at the water surface, and 5 feet deep.

Thus the great aim of the Company had been accomplished; vessels had passed from one lake to the other, and strong hopes were entertained that the Government would assume the canal as a Public Work.

The Directors petitioned the Government for assistance, either by loan or by subscription, and, as an inducement, submitted statements of the improvements and extensions which they proposed to effect.

The most important of these, and which was afterwards carried out, was the extension of the main line of canal over the Welland river to Gravelly Bay (Port Colborne). To accomplish this it was proposed to enlarge about 5 miles of the Feeder, which occupied the site of the proposed main line, and to excavate a new canal for the remaining distance of 6½ miles, to Gravelly Bay. The Government approving of this project, granted, in 1831, a loan of £50,000 ($200,000), to assist in its being carried out. This new work was immediately commenced; and, although almost suspended during 1832 by the prevalence of cholera, it was completed in 1833.

This may be considered as the opening of the present Welland Canal. It occupied nearly the same site as the present enlarged one; it had the same termini on Lakes Erie and Ontario; and it was supplied with water by a feeder occupying the same ground.

The greatest and most striking difference consisted in the locks being of wood, more numerous, and of smaller dimensions.

There were 40 locks, all of which were 110 feet long by 22 feet wide, with the exception of the first 3 ascending locks from Port Dalhousie, which were 130 × 32 feet, and one at Port Colborne, from the canal into Lake Erie, which was 125 × 24 feet. The breadth of the bottom of the canal, at the deep cut, was 24 feet.

In 1833, Mr. Wright, Civil Engineer, who had been employed to report on the state of the works, recommended that as fast as the locks failed they should be re-built in stone, and that their length should be 110 feet and their breadth 24 feet.

In 1837, Messrs. Baird & Killaly were instructed to make a correct survey of the canal, in order to select the best route before undertaking the permanent completion of the works; and, according to the instructions given to them, the locks were to be 110 feet long by 24 feet broad, with 8 feet water upon the sills; this was deemed sufficient to admit of schooner navigation.

They recommended that Port Colborne and Port Dalhousie should be retained as the termini on the two lakes, but that both of those harbors should be enlarged and deepened; that the sectional area of the feeder should be increased; and that, with slight exceptions, the enlarged works should occupy the same line as the old canal.

The excavated portion of the canal was to be 36 feet broad at bottom, 70 feet at surface of water, and 8½ feet deep. They estimated the cost of the proposed works, with locks of 110 feet × 24, as per instructions, at about £300,000, ($1,200,000). But they stated further, that such a scale of navigation would not be found sufficient for the wants of the country; recommending that the scale be increased for the accommodation of the steamers that were navigating the lakes, with locks 180 × 45, and the estimate in this case was £550,000, ($2,200,000).

No works, however, of any importance were executed between 1833 and the date of the Union of the Provinces of Upper and Lower Canada.

The Government appointed a Commission in 1833 to look after its interests in the management of the canal, and at various times granted further loans; and finally, in 1837, converted all its previous loans into stock.

In 1839, an Act of Parliament authorized the purchase of all the stock belonging to private individuals, but this was only carried into effect in 1841, after the Union.

Lieut.-Col. Phillpotts, R. E., was instructed by the Earl of Durham to report on the Canal Navigation of the Canadas, and, after an elaborate examination of all the designs proposed by the engineers who had studied the location of this canal, and also of several new lines, he recommended that Port Colborne should be retained as the terminus on Lake Erie, and Port Dalhousie on Lake Ontario; that the Lake Erie level should be adopted, and the supply of water be derived from that lake; and further, that the dimensions of the locks should be the same as those which were then being constructed on the Cornwall Canal—namely, 200 feet long by 55 feet broad, and with 9 feet of water on the sills. He estimated the cost of the proposed enlargement at a sum of £1,250,000 sterling, ($6,083,333.33).

At the period of the Union of the Provinces, in 1841, the total expenditure by the Government on these works amounted to $1,851,427,77, and the canal was placed under the control of the Department of Public Works—then called the Board of Works. (See Appendix No. 29, at page 330.)

It was then decided that all the locks should be rebuilt in stone, that their dimensions should be 120 feet long by 24 feet broad with 8½ feet of water on the sills; that the aqueduct should be rebuilt in stone; that the feeder should be converted into a navigable canal; that the harbors of Port Dalhousie and Port Colborne should be improved; that the two first locks at Port Dalhousie and the one at Port Colborne should be 200 feet by 45 feet with 9 feet of water on the sills; and finally, that the Port Maitland branch should be undertaken and completed with an entrance lock from Lake Erie 200 feet by 45 feet, and 9 feet depth of water. A sum of £450,000 sterling ($2,190,000) was appropriated for these purposes, by the Act 4th and 5th Vic., cap. 28, on the 18th of September, 1841.

The works were commenced in 1842. In 1843 the matter having been reconsidered, it was decided to make the locks 150 feet long by 26½ feet broad, and to widen the bed of the main line to 26 feet at the bottom.

The enlargement of the main line to those dimensions, from Port Dalhousie to the Feeder, and also of the Feeder to Dunnville, and the construction of the Port Maitland branch, were completed in 1845. The enlarged cut stone locks, were completed towards 1848.

The Grand River, having given evident signs that it could not be relied upon as an unfailing source of water during dry seasons, it was decided by the Department in 1843 that the early project of adopting the level of Lake Erie as the highest level of the main line and of supplying the Canal with water from the lake should be carried into execution. This design contemplated the lowering of the summit level about 8 feet, with a lock descending from the feeder into the main line. This work of lowering the summit level was commenced in 1846, and has not yet been completed. A portion of it has been accomplished by manual excavation in sections laid dry, and the remainder by dredging. The main line having been opened to Lake Erie, through the Feeder and the Port Maitland branch, in 1845, that section of the summit level which lies between the mouth of the Feeder and Port Colborne was emptied, and excavated by hand; but the progress of work on this section was much interrupted at first by the prevalence of sickness among the laborers, and by the failure of several contractors. In 1846 a contract was entered into for deepening the "deep cut" section, and widening its bottom to 45 feet, except, as stated in the specification, "at those parts where it may appear to the engineer that no danger of slides may be apprehended, at which places the bottom width is to be reduced to 26 feet." Dredging was executed under this agreement, in 1847, but in 1848 the contract was suspended by the mutual consent of the Department and the contractor. Although the section extending from the Feeder to Port Colborne was unfinished in 1850, nevertheless, water was let into it at that time, with the intention of completing its excavation by means of dredges.

During the progress of the works under these contracts, the Engineers of the Department urged that the proposed bottom width on the narrowest sections of the canal—namely, 26 feet—was too limited, that, notwithstanding the several passing places which were proposed, large vessels navigating the canal would be very much delayed. It was represented that in the "deep cut" the material through which the canal was excavated was of such a peculiar nature that it had a great tendency to slide, and that a narrow canal, such as was then being made, would be very frequently obstructed. It was also shown that deeply-laden vessels, such as navigated the lakes, had great difficulty in passing through the canal, and that it would be of great advantage if it was deepened.

To meet the demands of the trade, it was decided, in 1853, to deepen the canal to 10 feet of water on the mitre sills; and, in 1854, to increase the bottom width of the summit reach to 50 feet.

In the lower reaches of the canal the increased depth of 10 feet was obtained by raising the banks, but in the summit level the increased depth could only be obtained by excavation.

Contracts were therefore entered into, in 1854, for the deepening and widening of the whole of the summit level to 50 feet at bottom, by dredging, and the work has been continued since, so that the excavation required for this improvement is now nearly all completed, the only works remaining to be done being the clearing out of certain unfinished portions of the channel, the construction of a regulating weir at the Junction, which, together with the necessary minor works, have been estimated at $80,000.

In 1861 a guard gate was constructed above Lock No. 25, on the Thorold level. The necessity for this was shown in 1859, when the gates of this lock were torn away by a steamer, and the long reach above it was emptied, thus causing much damage, and a suspension of navigation for eight days. The present arrangement will prevent a recurrence of such delays as may arise from any similar accident.

The necessity of still further enlarging the Welland Canal has frequently been discussed, and it has been almost yearly referred to in the Annual Reports of this Department. In discussing this question of enlargement it has been suggested that a new line, from Lake Ontario to the head of the principal chain of locks above Port Dalhousie, should be adopted, and that the harbor of Niagara, at the mouth of the river of that name, should be the terminus on Lake Ontario. This project was discussed in the House of Assembly of Upper Canada so long ago as the year 1825. The inhabitants of Niagara, being deeply interested, employed an engineer in 1854, to examine the country lying between the harbor of Niagara and the summit level of the present Welland Canal, so as to ascertain how far the locality was favorable to the construction of a canal of large dimensions. The result of this examination was a report and plan showing that the proposed location offered facilities, and that a canal could be constructed there of 100 feet in width at bottom, 128 feet at water surface; and having locks 350 feet by 75 feet, with 12 feet water on the sills.

The estimated cost of the work, on this scale, for the section extending from the harbor of Niagara to the higher levels of the present canal, was $4,000,000; and if extended to Port Colborne, Lake Erie, $8,000,000.

Other lines, for proposed enlarged Canals from Thorold, or the higher levels of the main line to Lake Ontario, and retaining Port Dalhousie as the terminus on that lake, have been proposed; but none of the locations suggested have yet been adopted by the Department.

The expenditure by the Department on the construction of this Canal since the Union in 1841, to 1st July, 1867, as shown in Appendix No. 1, at page 3, is $4,900,820.60.

This sum does not include the amount expended by the Government on the Welland Canal previous to the Union, nor the amount paid for the purchase of Stock, &c., since the Union.

The total expenditure from the funds of the Provincial Government, on the construction of the Welland Canal, up to the same date, as shown by the Public Accounts, is $7,416,019.83. For details of which see Appendix No. 29, at page 330. To this, however, should be added the sum of $222,220 granted by the Imperial Government and expended before the Union; this makes the actual cost of the Welland Canal $7,638,239.83.

For expenditure on this Canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 482.

For statement of the Water Power and other property leased on this Canal—see Appendix No. 25, pages 298 to 303.

For a detailed description of the present condition of the works—see appendix No. 6, pages 56 to 58.

For statement of annual expenditure for repairs and working expenses on this Canal, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 328.

For a description of the works executed on this Canal during the year ending 30th of June, 1867—see Appendix No. 33, pages 344 to 349.

For depth of water on sills of locks at upper and lower entrance of Canal—see Appendix No. 46, pages 384 to 387.

For dates of opening and closing of navigation—see Appendix No. 47, at page 396.

For dates of opening and closing of navigation on Erie Canal, Hudson River and Lake Erie—see Appendix No. 47, at page 400.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For quantity of flour manufactured on the Canal—see Appendix No. 51, at page 423.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at pages 432, 433.

TABLE showing the size of the smallest Locks on the Canals of the St Lawrence line of Navigation, also the dimensions of the largest vessel which may pass through them.

Name of Canal.	Dimensions of Locks, in feet.			Dimensions of Vessel, in feet.			
	Length.	Breadth.	Depth of water on sill.	Length.	Breadth.	Draught of water when loaded.	Tonnage of Vessels.
St. Lawrence Canals........	200	45	9	186	44¾	9	600
Welland Canal..............	150	26½	10¼	142½	26¼	10	400
Sault Ste. Marie Canal.....	350	70 top 61 bottom	12	....	....	....	2000

BURLINGTON BAY CANAL.

Length of Canal .... ½ mile.

No locks on this Canal.

Average breadth between piers... 138 feet.

Narrowest.. 108 "

Navigable for vessels drawing 10 feet of water.

This Canal may be considered a branch of the main line of the St. Lawrence navigation, and is simply a cutting through a piece of low land which partly separates Lake Ontario from a large sheet of deep water, called Burlington Bay. It enables vessels to reach the City of Hamilton and the Desjardins Canal, the latter being a work belonging to a private Company, and leading to the Town of Dundas. (See Diagram No. III.)

The Bay lies at the upper end of the Lake, and is almost entirely separated from the latter by a sand bar 6 miles long and 300 feet broad. It has a mean depth of 25 feet and an area of about 10,000 acres, and contains several good landing places; so that the importance of opening a navigable channel between it and Lake Ontario became apparent at an early date.

We find that on the 19th of March, 1823, a Bill was passed, authorizing the construction of a navigable canal between Burlington Bay and Lake Ontario.

Commissioners were appointed to carry out the construction of this canal; and in 1825 they reported that they had secured the services of Mr. Hall, as Engineer, and had entered into contracts with a firm of contractors, who agreed to complete the work by the 1st of October, 1825, for the sum of $34,000.

The progress of the works was retarded by difficulties between the contractors and the Commissioners; and, although vessels passed through the canal in 1830, it was only in 1832 that the works were reported as completed.

From 1832 to 1841, the works appear to have been extended gradually every year, and the channel to have been deepened.

The amount expended upon this work up to the time of the Union, 10th February, 1841, was £31,089 0s. 5d. ($124,356.08).

When the Provinces of Upper and Lower Canada were united, this work was placed under the care of the Board of Works whose Chairman reported that this canal was in a ruinous and dilapidated condition.

In 1843 the Board commenced some improvements here, which were finished in 1850. These works consisted of the deepening, the straightening, and the widening of the artificial channel then in use; the lining of the sides of this channel with crib-work, filled with stone; and the establishment of a ferry over the channel.

In 1855 the outer end of the south pier was extended 300 feet into Lake Ontario, and the inner end of the north pier was extended 50 feet into the bay. Since then the piers have been rebuilt from low water mark to the top surface.

The expenditure by the Department on the construction of this Canal since the Union in 1841, up to the 30th of June, 1867, as shown in Appendix No. 1, at page 3, is $291,044.49.

The expenditure to the same date, as shown by the books of the Finance Department, amounts to $308,328.32; this does not embrace the amount expended prior to the Union.

The total cost of these works, as shown by Appendix No. 70, at page 483, is $432,684.40, from the time of their commencement to the 1st of July, 1867.

For expenditure on this canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 483.

For a detailed description of the present condition of the works—see Appendix No. 6, at page 58.

For a description of the works executed on this Canal during the year ending the 30th of June, 1867—see Appendix No. 34, at page 349.

For dates of opening and closing of navigation—see Appendix No. 47, at page 396.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 461 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

TUG SERVICE

CONNECTING THE ST. LAWRENCE CANALS.

In 1849, the Government deemed it proper to grant a subsidy to steam-boat proprietors, as an encouragement to maintain a line of steam tugs on the intervening navigable reaches which connect one canal with another, between Montreal and Prescott, on the St. Lawrence.

The boats were to leave each end of the line at stated intervals of time, and to tow vessels and barges at certain fixed rates, according to the size and tonnage of the vessels.

From 1849 to the present day these boats have been subsidized, and the service has been regularly performed, with the exception of the year 1852, for which year no appropriation had been provided.

The withdrawal of the subsidy, that year, was designed as an experiment to test the question whether individual entreprise would supply the demand. The result was unsatisfactory; and the line was not only re-established in 1853, but was extended, so as to comprise all the river portion of the line of navigation between Montreal and Kingston.

The service was performed with 3 Tugs in 1849; in 1850 with 2; and in 1851 with 4. During the four years between 1853 and 1857 six Tugs were on the line; and since 1857 there has never been less than nine.

The following statement shows the number of Steam Tugs employed, the rate of speed and the subsidy paid, each year, since the commencement of the Season of 1849, for the Tug Service between Lachine and Prescott up to 1852, and between Lachine and Kingston from 1853 to 1867.

Date.	Number of Steam Tugs each year.	Rate of speed.	Annual subsidy.	Between.
		Miles per hour.	$ cts.	
1849	3	5	7,000 00	Lachine and Prescott.
1850	2	5	4,000 00	"
1851	4	5	7,000 00	"
1852	Towage left to individual enterprise.			
1853	6		18,600 00	Lachine and Kingston
1854	6	Upwards in 4 days. Downwards in 3 days.	18,600 00	"
1855	6		24,000 00	"
1856	6		24,000 00	"
1857	6		24,000 00	"
1858	9		24,000 00	"
1859	9		24,000 00	"
1860	9		24,000 00	"
1861	9		20,000 00	"
1862	9		20,000 00	"
1863	9		16,000 00	"
1864	9		12,000 00	"
1865	9		12,000 00	"
1866	9		12,000 00	"
1867			12,000 00	"

LAKE ST. PETER.

The River St. Lawrence, from the Gulf to Quebec, has a sufficient navigable depth for the largest vessels afloat, but it is not so between Quebec and Montreal.

At Quebec the tide rises and falls 18 feet in ordinary springs and 13 feet in ordinary neaps, and is felt as far as Three Rivers, 74 miles above Quebec.

Lake St. Peter is a widening of the St. Lawrence, which commences some 8½ miles above the town of Three Rivers, and is about 31 miles long by 8 miles broad. (See Diagram No. IV.)

Capt. H. W. Bayfield, Commander Royal Navy, who surveyed this lake in 1830, stated, in a Report written May, 1831, that the upper end of the lake was about 2 miles above the town of William Henry (Sorel), and was occupied by a number of alluvial islands, the lowest visible stratum of which is a tenacious blue clay, over which is a stratum of sand; that these islands are formed of alluvial matter which during ages has been brought down the river, and has been deposited in the more tranquil waters of the lake; and that the formation of islands and shoals in this locality is still going on.

He also stated that all round the lake similar deposits are observed, and are contracting the width of the navigable channel; but that in proportion to its contraction, it is reasonable to suppose that it must deepen, as the current of the river has to force itself through a narrower space. He stated, however, that this process is so slow that it will require many years before it produces any sensible effect.

Commander Bayfield then proceeds to describe the channel, from the upper end of the lake descending, as follows:—

" The ship channel is sufficiently deep for the largest vessels, all the way between the islands, nor does it become shoal until we arrive at a point about 3 miles below the most eastern island; here there is a narrow pass between the shoal which extends off that island, and the shoals off the Rivers Yamaska and St. Francis, through which the united waters of the larger channels pass. At this pass, the light vessels and buoys are placed. Its width is about half a mile, and the depth of water is about 14 feet for about the same distance. This is called the Bar; and were there no other obstruction, it would be easy to deepen the channel. For a distance of about 3 miles further down, the channel, which becomes much wider, is sufficiently deep; it then expands into an extensive flat, for a distance of six miles (always nautical miles), over which, when the waters are low in autumn, there is only 11½ feet water. The bottom for a few inches is sand, over a tenacious but not very hard clay, similar to that of the islands."

From the head of Lake St. Peter to Montreal, there were several shoals in the river; and the Port of Montreal itself, before it was improved, afforded a very limited depth of water. These facts being considered by the merchants of Montreal, they presented a petition in 1826, to the Lower Canada Legislature, praying that an aid be granted for clearing the St. Lawrence at Ile Plate and in Lake St. Peter.

The matter was referred to a Committee, who examined several Pilots and Captains of vessels, all of whom expressed the opinion that it was not possible to clear a channel that would not be quickly filled up again by the quicksands.

The Chart of the lake and Report by Capt. Bayfield, in 1831, afforded considerable information to the parties interested in the navigation of the St. Lawrence, but it did not afford much encouragement to those who advocated the trial of the experiment of dredging a channel; for, both in his report of 1831 and in 1835, in his evidence before a committee of the House of Assembly, which had been appointed to report on a petition of the merchants of Montreal, in reference to the improvements of the navigation through the Lake, he stated that it appeared very problematical whether any efficient means could be devised to remove the impediments in the Lake and River, so as to enable vessels, of a greater draft of water than were then employed in the trade, to pass through the Lake to Montreal.

In 1838, the Montreal Committee of Trade represented, in a petition to Parliament, that the Lake was so shallow as to prevent the passing of vessels drawing more than from 10 to 12 feet of water, and that they, the petitioners, had been assured, by scientific men, that the ship channel, through the Lake, could be deepened to 16 feet at no very great expense.

Immediately after the union of the Provinces of Upper and Lower Canada, the Department of Public Works (then Board of Works) ordered a survey. Mr. D. Thompson, Civil Engineer, made the necessary examination, and gave it as his opinion that the opening and maintaining of a channel 16 feet deep was practicable; and in the Memorandum submitted to the Government by the Board of Works in 1841 of the various appropriations required to carry out certain Public Works, the sum of £60,000 sterling ($292,000) was demanded for deepening Lake St. Peter, and by 4th and 5th Vic., cap. 28 (September 18th, 1841) the sum of £58,500 sterling ($284,700) was appropriated by the Legislature for this work.

Immediate steps were taken to have the works commenced, but as a large outfit of dredges and other necessary machinery had to be constructed, and as these were only completed in 1843, the actual dredging was only commenced in 1844 with two dredges, two steamboats, and the necessary scows.

The report of 1844, made by the Chairman of the Board of Works, states that the channel followed by shipping in passing through the Lake was crooked; and that, after mature deliberation, it had been decided to leave the natural channel as it was, and to cut a new channel on a straight line through the flats; the breadth of the new channel was to be 150 feet, and its depth during the season of low water 14 feet, or 3 feet deeper than the old channel.

The works in the new channel were continued through 1844 and 1845; but it having been stated in the Departmental Report for 1845 that the works could not be completed for the sum appropriated, the matter was referred to a Select Committee of the House of Assembly in June, 1846.

This Committee, after visiting the Lake and receiving evidence, advised that the straight channel should be abandoned, and that the old channel should be adopted and improved.

The works were therefore suspended, and Capt. Bayfield was consulted as to whether the straight channel should be proceeded with, or the old channel improved and adopted.

This gentleman, after a detailed examination of the works, stated that if he had been consulted, and if all the facts had been submitted to him in the first instance, before any expenditure had been incurred, he would have recommended the adoption of the natural hannel; but as a large part of the excavation necessary to the forming of the straight channel had been performed, he would advise its completion to a breadth of 300 feet and 14 feet depth.

This report having been approved of, the works were resumed in September, 1846, and continued until the 16th of September, 1847, at which date the works were suspended for want of funds.

There were so many conflicting statements and rumors circulated in reference to the supposed silting or filling-up of the excavated channel, that, in 1848, the Commissioner of Public Works personally inspected the works, and caused a great number of soundings to be taken in his presence. The Commissioner reported the result of his visit to the Governor, and stated that the newly excavated channel was not filling up, that "the width " of the channel varied in some places from 100 to 150 feet, that the total length, where " the dredges had been in operation was seven miles, and that there yet remained from one " and a half to two miles to be excavated in order to complete the straight cut."

The total expenditure up to 31st December, 1850, was £74,041. 1s. 4d. ($296,164.27).

The merchants of Montreal having repeatedly urged on the Government the importance of completing, at as early a day as possible, the deepening of a channel through the Lake, and having stated that they would cheerfully submit to a toll levied on all vessels of great draft which would pass through the Lake, an Act was passed in August, 1850, empowering the Harbor Commissioners of Montreal to excavate a channel through Lake St. Peter to a depth of 16 feet,—the said channel to be made in such a manner, direction and place, as should be deemed best by the Commissioners, and also to deepen the channel in the St. Lawrence, at or near Ile Plate.

To meet the expenditure required to carry out these improvements, the Commissioners were authorized to borrow the sum of £30,000 ($120,000) and to levy a tonnage duty not exceeding 1s. per ton of the registered tonnage of all vessels drawing 10 feet water or upwards, as often as they passed through the Lake.

The Act also authorized the Commissioner of Public Works to place the dredges, boats, and other machinery used in the works already commenced, at the disposal of the Harbor Commissioners.

The Harbor Commissioners, after a careful examination of all the circumstances of the case, deemed it advisable to abandon the works commenced on the new channel, and resolved to deepen and enlarge the natural channel. This improvement necessitated an excavation in this channel of eleven and a half miles in length.

In 1852, the Commissioners were authorized, by an Act of Parliament, to effect an additional loan of £40,000 ($160,000) to be applied to this work, and in 1855 a further loan for £100,000 ($400,000) was similarly authorized. This last Act provided that the channel should be excavated to a depth of 20 feet at low water.

The works were vigorously prosecuted, and with great success.

In 1859 an advance of $60,000 was made by Government, the Harbor Commissioners giving security on their plant.

In 1860, the channel had been deepened to 17½ feet at low water, when there was only 11 feet water on the flats, and the debt incurred by the Harbor Commissioners on this work, not including the $60,000 loaned to them by the Government, amounted to $680,000. The Government having this year determined upon diminishing the toll that had been hitherto levied on vessels passing through the new channel, assumed this debt of $680,000. This action was confirmed by a Bill passed in 1864.

It had also been agreed upon in this year (1860), between the Government and the Harbor Commissioners, that the latter should continue the deepening of the channel, through the Lake, to a depth of 20 feet at low water, by a breadth of 300 feet, on the following conditions, namely :—

1st. That the Government should pay a further sum of $160,000, on the completion of the works.

2nd. That the Harbor Commissioners should not be called upon to refund the $60,000 loaned to them in 1859.

3rd. That the plant should be left in their hands.

The dredging was carried on by the Commissioners on these conditions, and in the early part of 1865 they applied to Parliament for an Act to enable them to borrow the sum of £25,000 sterling ($121,666.67), the principal and interest of which was to be payable by the Montreal Harbor dues, so that they might complete the work according to their agreement.

A Bill with this object was introduced; but the Session having been suddenly brought to a close on the 18th March, 1865, it did not become law until the following Session, in the month of September of that same year.

In the spring of 1865 the Harbor Commissioners had obtained assistance from other sources, and adding to this a loan of $7,000 from the Government. they had been enabled to proceed with the work during the summer of 1865, and with such effect, that in the autumn of that same year, they reported that a vessel drawing 20 feet of water had been passed through the channel, on her way from Montreal to Quebec, during the season of low water.

The Chief Engineer of this Department has been instructed to report whether the work has been completed in a satisfactory manner.

The expenditure by the Department on this work since the Union in 1841 up to the 30th of June, 1867, as shown in Appendix No. 1, at page 6, is $103,240,50.

The total cost of these works from their commencement to the same date as shown by the books of the Finance Department amounts to $1,164,235.08.

For expenditure on this work before and since the Union, from Government and other funds—see Appendix No. 70, at page 483.

For proclamations respecting tolls and regulations on this work—see Appendix No. 55, at page 433.

DREDGING CHANNEL THROUGH LAKE STE. CLAIRE FLATS.

Lake Huron is connected with Lake Erie by the River Ste. Claire, Lake Ste. Claire and the Detroit River; the navigation throughout is safe except in Lake Ste. Claire where there are extensive sand banks covered with a depth of water varying from four to ten feet. Through these banks the current forces its way and keeps open five or six channels from eight to fourteen miles long, one of which, called the South or Walpole channel, forms part of the boundary between Canada and the United States.

Previous to the year 1858, much inconvenience was experienced by persons navigating the Lakes, from the insufficient depth of water in the channels, through these banks, or flats, as they are sometimes termed. The route most generally followed by vessels, previous to that year, was through the North Channel, a passage which lies on the United States side of the boundary. It was described as shallow, circuitous, and intricate; its length was stated to be about nine miles, and it was admitted to be impossible to pass through it at night. During low water, it often occurred that a deeply laden vessel would ground in the channel, and that fleets of sixty and seventy vessels would be waiting for an opportunity to pass.

The condition of this portion of the main line of the St. Lawrence navigation formed the subject of an enquiry instituted by several Civil and Military Engineers of the United States. Three passes were suggested, and it was proposed that the adopted one should be deepened to 12 feet at low water, and to a breadth of from three to six hundred feet. It was also proposed that the sides of the cutting should be protected either by lines of close piling, or crib work,—or that the slopes of the cutting should be so long and flat, as to prevent all danger of the sand falling, into the projected channel, from the sides. The South or Walpole Channel was adopted as the best and most direct; the natural condition of this channel was, that with the exception of about one mile it was both broad enough and deep enough throughout its whole length.

The matter appears to have been brought before the United States Government in 1854; but no appropriation having been obtained for the works, the business men of several of the cities lying on the banks of the lakes, and engaged in the trade over these waters, resolved to undertake the work as a private enterprize.

They solicited aid from the Canadian Government, and on the 25th of April 1855, an Order in Council was passed granting a sum of $20,000 to be applied to this work.

The works were commenced and carried on by a committee of the citizens appointed for that purpose; and about 1,900 feet of the channel were excavated to a breadth of 60 feet at bottom, and to a depth of 12 feet at low water.

In 1856, the United States Government appropriated the sum of $45,000 to this work, with the use of a dredging machine and scows which rendered the appropriation equivalent to $50,500.

The work was continued in 1857 by the government engineers of the United States, and a channel, 5,600 feet long, 200 feet broad at the bottom, with a minimum depth of from 11½ to 12 feet water, and with side slopes of about 1 in 20, was completed in August, 1858.

The line of the channel was indicated by a light-house and beacon, placed by the United States Government at the north-east end of the cutting, and also by buoys on the side of the cutting.

According to the original design the artificial channel was to be at least 300 feet in breadth or one hundred feet broader than the one executed. The Canadian Government therefore resolved to expend the grant of $20,000 made in 1855 on the widening and improvement of the channel.

The Chief Engineer of this Department was authorized, in 1858, to take the necessary steps to carry this into effect, and a contract was entered into with the same parties, who had executed the work for the United States Government.

The work executed under this contract, consisted in the removal of several bars left by the previous dredging, the straightening of the north side of the cutting throughout its whole length, and the widening of the channel, so far as could be accomplished for the amount appropriated.

The average depth of the excavation made by the Department, on the north bank, was 4½ feet.

The result of this labor, was that the channel was deepened to fully 12 feet, in all its parts, and that its breadth was increased to 300 feet, at the upper end, and to 275 feet at the lower.

The works were completed in the autumn of 1858.

The expenditure by the Department on this work up to the 30th June, 1867, as shown in Appendix No. 1, at page 6, is $19,984.45.

The total cost of the work, as shown by Appendix No. 70, at page 483, amounts to the sum of $70,484.45, of which $50,500 were furnished, by the United States Government, as already stated.

PROJECTED WORKS.

The undersigned has no intention of presenting a full account, or even a complete list, of all the various Public Works that have been, from time to time, projected for the service of these Provinces; he deems it necessary, however, to name a few of the larger improvements which have been devised for the inland navigation of the country; such for instance, as the deepening of the St. Lawrence Rapids,—the Montreal and Lake Huron Navigation *viâ* the Ottawa and French Rivers,—and the St. Lawrence and Lake Champlain Canal,—none of which have yet been commenced, though they have all been examined and surveyed by Engineers, whose reports as well as other papers on the same subject are recorded in the Public Archives.

A minor project known as the "Murray Bay Canal" having received the attention of the Department, during the past year, will be also found in this report.

THE NAVIGATION OF THE ST. LAWRENCE RAPIDS.

That portion of the St. Lawrence which lies between Lake Ontario and Montreal, has already been described as a succession of navigable reaches separated by rapids.

In the distance of 183½ miles, following the main channel of the river, from Lake Ontario to Montreal, 139⅜ miles are made through smooth water, and 44⅛ miles through rapids, and the total fall of the river between these two points is about 221¾ feet.

It has also been shown that to overcome these 44⅛ miles of rapids, six canals are required, the total length of which is 43⅝ miles.

The canals are, as a matter of course, used by the boats ascending the river, but in descending, all steamers and vessels not too deeply laden, run the rapids, and thus avoid the loss of time incurred by passing through the canals.

The downward passage of vessels is thus accomplished with great rapidity.

It is not safe for a lightly framed steamer to attempt this passage, but the steamers of the mail line, built expressly for this purpose, are of great strength, and these vessels, as well as a great number of other classes, pass through these rapids daily without accident.

The engineers, who have examined these rapids, report that the velocity of the current does not exceed at any point 14 feet per second, and it is asserted that the navigation down some of the larger rapids is so safe, that if a vessel is only fairly headed to the upper entrance of the channel, it would be a matter of great difficulty to turn her out of it.

The rapidity with which vessels can make these downward passages, over this portion of the St. Lawrence, is a circumstance of great commercial value.

The following table will show the relative position and length of the rapids on the St. Lawrence, descending from Lake Ontario to Montreal :—

SECTIONS OF NAVIGATION.	Distance in Miles.	Total Distance from Kingston.
From Kingston, at the foot of Lake Ontario, to the head of the Galops Rapids	66⅜	66⅜
From the head of the Galops Rapids to the foot of the Iroquois Rapids (Galops Canal); (The current, between the Galops and Iroquois Rapids, is so strong that the two rapids are here classed as one)	7⅝	74
From Iroquois Rapids to Rapide Plat	4½	78½
The Rapide Plat (Rapide Plat Canal)	4	82½
From Rapide Plat to Farran's Point Rapids	10½	93
The Farran's Point Rapids (Farran's Point Canal)	¾	93¾
From Farran's Point Rapids to the Long Sault Rapids	5	98¾
The Long Sault Rapids (Cornwall Canal)	11½	110¼
From Long Sault Rapids to the Côteau Rapids, at the upper end of McIntyre's Island	32¾	143
The Côteau Rapids, from McIntyre's Island to Pointe au Diable (Beauharnois Canal)	3¼	146¼
From Côteau Rapids to Village of Cedars, the head of Cedar Rapids (Strong Current) (Beauharnois Canal)	5	151¼
Head of Cedar Rapids, from Cedar Village to Pointe du Moulin (Beauharnois Canal)	1¾	153
From Cedar Rapids to Point Coulonge, the head of the Cascades Rapids (Strong Current) (Beauharnois Canal)	2¼	155¼
The Cascades Rapids (Beauharnois Canal)	2½	157¾
From Cascades Rapids to the Lachine Rapids	15¼	173
The Lachine Rapids (Lachine Canal)	10½	183½

It will be seen by the foregoing table that in descending from Lake Ontario to Montreal, the first three rapids passed are, the Galops and Iroquois, the Rapide Plat and the Farran's Point; none of which can be said to be more than strong currents increasing the speed of the descending vessels. They are also easily ascended by the more powerful class of steamers; while sailing vessels and freight boats go up through the Canal. The water in these rapids is deep, except at one point however, in the Galops; where a short shoal traverses the channel having only 9 or 10 feet water over it.

The fourth rapid is the Long Sault extending from Dickinson's Landing to near the Town of Cornwall and overcome by the Cornwall Canal. At the upper end of this rapid and in its most difficult part, there are two channels by which it may be descended, namely, the "Lost Channel" on the Canadian side and the "South Channel" on the American side.

The Engineers employed on the survey of these rapids have described the "Lost Channel" as the roughest, but at the same time the safest and most efficient of all the St. Lawrence Rapids. In many parts, the depth of water is over 50 feet; one shoal has however been discovered with only 12 feet water over it. William Hoople, a pilot residing at Cornwall, appears to have been the first person who ventured down the "Lost Channel" with a boat. He tried the experiment in the spring of 1848: first in an open boat, and a few days later with a steamboat.

The fifth, sixth and seventh rapids are the Côteau, Cedars and Cascades.

These three rapids are separated by short intervals of smoother water, but they are so near each other, that the designers of the St. Lawrence Canals considered them as one, and avoided them by constructing one Canal (The Beauharnois), embracing the three rapids.

There are two channels through the Côteau Rapids; the depth of water in these channels is in many places over 20 feet; but near Prisoners Island there are two shoals, with only 7½ to 10 feet depth at low water.

From the Côteau Rapids to the Cedars, the water is deep and tranquil with a moderate current.

The channel through the Cedar Rapids is generally from 12 to 35 feet deep; but one or two shoals have been discovered in it near Chûte à Bouleau, with only 9½ to 10 feet at low water.

From Cedar Rapids to the Cascades, the current is moderate. In this distance there occurs one shoal known as La Chaînette, with a depth of only 6 to 7 feet of water during the dry season. It has been reported as the shallowest spot in all the rapids between Kingston and Montreal.

In the upper portion of the Cascades rapids there are two channels which, about midway down, merge into one. The shoals in these rapids are considered as the most formidable of any between Lake Ontario and Montreal.

The eighth rapid is the Lachine; the upper portion of this rapid between Ile au Diable and Ile au Héron is the most turbulent, but the channel is sufficiently deep to allow the passage of vessels drawing 10 feet water. In the lower part of the rapid, near St. Paul and Moffatt's Islands opposite Montreal, there are two shoals with little more than 8 feet of water over them during the low water periods.

Previous to the construction of the Canals, the rapids were only descended by such boats as could be towed up against the current and were not larger than 5 to 15 tons burthen. The depth of the water in the rapids was not, therefore, at that time a question of much interest; but as soon as the canals were completed, experiments were made, and it was soon ascertained that steamboats and other vessels of strong build and not drawing too much water, could be taken down all the rapids with perfect safety.

The difference of the time required to run a boat down the rapids compared to that required to pass through the canals was so great, that the question arose whether these rapids could not be improved so as to allow vessels of all descriptions and not drawing more than 9 or 10 feet water, to descend with safety. With this view the Chief Engineer of this Department, in the years 1848 and 1849, examined the rapids, assisted by one of the most experienced navigators of the St. Lawrence. Also in 1850 a second engineer was employed to make an examination of the same. These gentlemen furnished reports in the years 1850 and 1853, in which it was proposed to give greater depth of water in the rapids by constructing piers to guide the vessels, and dams partially crossing the river, so arranged as to throw a greater volume of water into the channel. The details as to the location of the dams in the designs presented by the two engineers, were slightly different, but they were both confident that a depth of water sufficient to allow the passage of vessels drawing 10 feet could be obtained by those means.

The estimated cost of the works between Lake St. Francis and Montreal, proposed by the Chief Engineer of this department, was £30,000 ($120,000).

In the year 1854 also, two engineers, who had successfully carried out some important submarine works in the harbor of New York, made a survey of the rapids between Lake Ontario and Lachine. Their opinion was, that in order to allow the passing of vessels drawing 10 feet of water, the depth of the channel should not, in any part of the rapids, be less than 12 feet, and in the roughest portions 13 feet; and further, that the river St. Lawrence in its then condition might be considered navigable during the low summer water from Prescott to the foot of Lake St. Francis, for vessels drawing eight feet water; and from Lake St. Francis to Lake St. Louis, for vessels drawing six feet, except during the higher stages of the river, when the draft might be increased to eight and a half and six and a half feet.

These latter gentlemen in their designs, proposed to obtain the required depth of 12 to 13 feet water in the rapids by blasting and excavating the rocky beds of the channel; and estimated the cost of accomplishing these works between Lake Ontario and Lake St. Louis (not including the Lachine Rapids) at £180,000 ($720,000).

THE MURRAY BAY CANAL.

This canal is as yet only a projected work. But it has been thought advisable to state here the object to be obtained by its construction, and a few of the leading events which have taken place with reference to it.

A glance at the map of Upper Canada will show that the peninsula called "Prince Edward" lies at the lower extremity of Lake Ontario, being joined to its northern shore by a narrow neck of land. The extreme length of this peninsula is about 38 miles, and its extreme breadth about 16 miles; it is separated from the main land by a long and narrow inlet of water, known as the "Bay of Quinté." The opening of this Bay is from the eastward, and vessels ascending the St. Lawrence enter it by keeping close to the north shore of Lake Ontario.

Steamers and sailing vessels going west are obliged to strike out at once into the open lake, in order to clear "Long Point," the extremity of Prince Edward peninsula.

In former times, to double "Long Point" was deemed an affair too hazardous for the "bateaux,"or smaller craft then employed, they therefore entered the lake by creeping along the north shore, under the shelter of Amherst, Gage and Wolf Islands till they reached the smooth water of the "Bay of Quinté," which they followed up to its head, and there discharged their cargo at a portage—formed by the narrow neck of land, about two miles broad, which connects the peninsula with the north shore. This neck of land is in the Township of Murray, and it has often been suggested that a canal should be cut through it. This proposed canal is known as the Murray Canal.

Though the danger of doubling "Long Point" has been much diminished by the introduction of steam navigation, the cutting of this canal has been steadily kept in view, because of the many advantages which it is alleged it would afford, both in a military and a commercial point of view.

The first official notice of this proposed work occurs in 1796, when a resolution was adopted by His Excellency the Lieutenant-Governor in Council, to reserve 3,000 acres of land as a grant in favor of the construction of the canal; but it seems the lands in question were surveyed in 1815, and were sold without any reference to the object contemplated by the above-mentioned resolution of Council.

In 1825 the importance of the proposed canal as a public work was fully discussed in a report on the internal navigation of the Province, by a Committee of the House of Assembly, specially appointed for that purpose.

In 1833, in answer to a prayer of the House, the Governor ordered that a survey of the proposed line of canal be made, and, in pursuance of this order, Mr. N. H. Baird, Civil Engineer, was appointed to make the survey. This gentleman reported on the 16th of November, 1833, that to connect the head of the Bay of Quinté with Weller's Bay, Lake Ontario, through the isthmus of Prince Edward, a canal would be required two miles long; that owing to the action of certain winds, the level of the water at the head of the Bay of Quinté was often one foot lower than the water on the other side of the isthmus, and that a lock was therefore necessary.

Presqu'Ile Harbor, which lies at a short distance above the head of the Bay of Quinté has been pronounced by competent authorities to be one of the best natural harbors on Lake Ontario. Mr. Baird, therefore, examined a line for a canal from the head of the Bay of Quinté to this Harbor, and found that its length would be five miles and a quarter. He recommended the shorter line to Weller's Bay, and estimated that the cost of this Canal, with one lock, for steamers and vessels drawing eight feet water, would be £42,845 12s. 6d ($171,382.50.)

In 1838 an Address, dated the 16th of February, was presented by the House of Assembly to His Excellency the Lieut.-Governor, setting forth that, in the opinion of that

House, it was more expedient to defray the cost of constructing the canal by a grant of money than by any appropriation of lands, and His Excellency was pleased to express his concurrence in their views.

Lieut.-Col. Phillpotts, R. E., in a general report, dated Aug. 3, 1840, on the Inland Navigation of the Canadas, estimated the cost of a canal, 10 feet deep, and of dimensions sufficient to admit large vessels, from the head of the Bay of Quinté to Weller's Bay—nearly two miles, at £50,000 sterling ($243,333.33). He also examined the line to Presqu'-Ile Harbor, and estimated the cost of that project at £90,000 sterling ($438,000.)

In obedience to a request made by Parliament in 1845, the Department of Public Works caused a survey to be made of a canal from the head of the Bay of Quinté to Presqu'-Ile Harbor. The engineer who made the survey reported that in his opinion a lock would not be required there, and that the length of the proposed line would be about four and a half miles. He estimated the cost of a canal, 100 feet wide at bottom, with 10 feet water, and without a Lock, at £126,861 6s. 10d. ($507,445.37).

The Chief Engineer of Public Works at that day, writing on the same subject in 1846, says that the scale or dimensions of this canal cannot be fixed without previously making a nautical survey of Presqu'Ile Harbor and the Bay of Quinté.

Since that time the attention of the public men of the Province has been frequently drawn to this subject, and a Committee of the House, in July, 1866, received evidence showing the importance of the projected canal. The Committee having recommended a further examination of the proposed line of the canal, another survey was authorized and it is now in progress.

MONTREAL AND KINGSTON *viâ* OTTAWA.

This second line of navigation extends from Montreal to Kingston, passing up the Ottawa River as far as Ottawa City. The distance between Montreal and Kingston by this line is 246¼ miles.

The Canals on this route, after leaving the Lachine Canal, are as follows:—

The Ste. Anne,—(known as the Ste. Anne Lock);
The Carillon;
The Chûte à Blondeau;
The Grenville;
The Rideau.

Their united length is 142⅞ miles, including the Lachine Canal, and in going from Montreal to Kingston the total lockage is 578½ feet, viz:—401½ rise and 177 feet fall, during seasons of high water.

The Carillon, the Chute à Blondeau, the Grenville and Rideau Canals were designed as military works.

TABLE OF DISTANCES IN STATUTE MILES.

SECTIONS OF NAVIGATION.	Intermediate Distances.	Total Distances from Montreal.
The Lachine Canal	8½	......
From Lachine Canal to Ste. Anne Lock	15	23½
Ste. Anne Lock and Piers	⅛	23⅝
From Ste. Anne Lock to Carillon Canal	27	50⅝
The Carillon Canal	2⅛	52¾
From the Carillon Canal to Chûte à Blondeau	4	56¾
Chûte à Blondeau Canal	⅛	56⅞
From Chûte à Blondeau Canal to Grenville Canal	1⅜	58¼
The Grenville Canal	5¾	64
From the Grenville Canal to the Rideau Canal	56	120
Rideau Canal, ending at Kingston	126¼	246¼

STE. ANNE LOCK.

Length of Canal	⅛ mile.
Number of locks	1.
Dimensions of lock	190 feet × 45 feet.
Total rise of lockage	3 "
Depth of water on the sills	6 " at low water. 7 " at ordinary high water.

From the head of the Lachine Canal to the Lock at Ste. Anne, through Lake St. Louis, the distance is 15 miles.

The River Ottawa flows from the N.W., and at its junction with the St. Lawrence is divided into four distinct channels caused by its meeting at this point a cluster of large islands. The largest of these is the Island of Montreal, which, as already stated, is 32 miles long, and in its greatest breadth 10 miles.

The next in size is called "Ile Jésus," 20½ miles long, and 7 miles broad, and the third, "Ile Perrot," 7½ long, and 3½ miles broad.

Two of these channels flow on either side of the Ile Perrot, which island lies between Vaudreuil and the head of the Island of Montreal, and discharge into the expansion of the St. Lawrence, called Lake St. Louis. The two other channels are formed by the large island "Ile Jésus" lying north of the Island of Montreal, and join the St. Lawrence at the foot of these islands.

The Ottawa, immediately before its descent into the St. Lawrence, through the four channels just described, spreads out into a wide space, and this expansion is called the Lake of "Two Mountains;" the waters of this lake are about 3 feet higher than the waters of Lake St. Louis, and are therefore precipitated through the two channels running round "Ile Perrot" with considerable force, forming a succession of short rapids.

In the channel which runs between "Ile Perrot" and the head of the Island of Montreal, the rapid is opposite the Village of Ste. Anne, and Ste. Anne lock is designed to overcome this rapid. (See Diagrams Nos. II, V, VII.)

The works consist of little more than a Lock, with a wing dam and guide piers above, and a protection and guide pier below; there are also 2 guide piers about one mile below the lock.

The channels above and below the lock are crooked and imperfect, and so much labor would be required to improve them, that Engineers are of opinion, that it would be better to form a new canal altogether, extending above and below the present lock and avoiding, by its greater length, all the rapids, the strong current and the crooked channels.

In 1831 an appropriation was made by the Legislature of the Province of Lower Canada for the construction of a canal or such works as would overcome the rapids at Ste. Anne, and on the 13th of December of the same year, the Governor transmitted to the House, the report of Lieut. Col. Henry Duvernet, R.E., proposing three different plans, estimated severally at

1st—$ 91,786.80
2nd— 94,839.60
3rd— 186,896.60

The subject seems to have been again considered by the Legislature in 1834, on the presentation of a petition from T. E. Jones, praying that he might be allowed to construct a canal along the front of his property in the Village of Ste. Anne with power to collect toll.

A committee reported favorably on this petition, and a Bill was accordingly brought before the House, but was only read a first time.

Various other designs for the construction of a canal and lock in this locality, on the same scale as the Rideau Canal, were prepared, in 1835, by Capt. P. Yule, R.E.

On the 24th of February, 1836, the Governor transmitted to the House another petition, stating that the benefits of the Rideau Canal were but partially felt, owing to the want of the lock at Ste. Anne Rapid, that a lock had been built by a private Company, for its own business, but that all access was denied to others though offering to pay toll, and thus the private Company in question secured to itself a monopoly of the Rideau Canal,

The lock here alluded to, had been constructed in the Vaudreuil channel between the main land and "Ile Perrot." No official record of the date of its construction has been found, but it appears to have been first built in 1816, by the "St. Andrews Steam Forwarding Company," and was only large enough to pass a steamer of some 20 horse power. This lock subsequently passed into the hands of the "Ottawa Forwarding Company," and in 1832 and 1833 was rebuilt by them in wood, on the same scale as those of the Grenville Canal. After the completion of the lock at Ste. Anne it was abandoned.

The monopoly enjoyed by this Company was found to be so injurious to the genera interest that the Legislature of Upper Canada felt itself compelled to make strong representations to the Governor upon the subject; this resulted in immediate steps being taken for the construction of the present Ste. Anne Lock.

Accordingly in August, 1839, the Board of Works of Lower Canada deputed an engineer to make the necessary surveys and plans. Tenders for the work were received in the autumn of 1839; but owing to a prolonged discussion in reference to the effects of the proposed works on the level of the waters of the Lake of Two Mountains and also in reference to the question whether Ste. Anne was the best site for the lock, the contract for the execution of the works was not signed before the 18th of May 1840. At the time of the Union of Upper and Lower Canada, this work was among those transferred to the Government of the United Provinces; the cost of its construction then amounted to $19,860.02.

The lock was so far completed on the 22nd of June, 1843, that boats could then have passed through, and a few days after, viz., on the 26th, the first boats were permitted to ascend and to pass by that route into the lake above.

On the 14th of November following, the works were announced as complete.

Several lesser works have been executed since the opening of the lock in 1843, viz: two piers in 1849, below the lock, to guide vessels through the channel. The clearing of rock out of the channel was continued through the years 1851, 1856, 1857 and 1858; the building of a pier extending 150 feet above the lock, commenced in 1855 and finished in 1856.

The expenditure by the department on the construction of this work, since the Union up to the 30th of June, 1867, as shown in Appendix No. 1, at page 3, is $114,596.49.

The total cost of this work, from the time of its commencement to the 30th June, 1867, as shown by Appendix No. 70, page 484, is $134,456.51.

For statement of annual expenditure for repairs and working expenses on this work, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 329.

For expenditure on this canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 484.

For a detailed description of the present condition of the works—see Appendix No. 3, at pages 33 and 34.

For a description of the works executed on this canal during the year ending the 30th of June, 1867—see Appendix No. 30, at page 335.

For depth of water on lower mitre sill of Lock—see Appendix No. 46, at page 388.

For dates of opening and closing of navigation—see Appendix No. 47, at page 398.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls &c., for 11 years between 1857 and 1867—see Appendices Nos. 63, 64, pages 454, to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this lock—see Appendix No. 55, at page 432.

ORDNANCE OR MILITARY CANALS.

These canals comprise the Carillon, the Chute à Blondeau, the Grenville and the Rideau. They were constructed bp the Imperial Government and for years afterwards were managed by imperial authority. (See Diagrams Nos. II and VII.)

On the 24th of March, 1848, the Imperial Government proposed to transfer them to the care of the Provincial Government, and to confide the management of the same to a Board composed of civil and military officers.

The state of the finances did not then warrant the Province in accepting the proposed transfer, as it was supposed that the cost of management and repairs of the works would exceed the revenue to be derived therefrom.

On the 3rd of March, 1853, a second proposition was made by the Imperial Government, offering to transfer the Canals to the Provincial Government and to defray the cost of the maintenance and management thereof up to the 30th of September, 1853.

Pending the settlement of the question, the Provincial Government, by an Order in Council of the 13th May, 1853, resolved to pay the expenses of maintenance and management of these works, from the 1st of October, 1853.

The conditions upon which the Ordnance property was to be transferred, were stated in a third despatch of the 14th July, 1853. The Provincial Government, by an Order in Council of the 14th September, 1853, declared the proposed conditions acceptable, but demanded the absolute control and management of the Canals and lands to be transferred with the same. This proposal was agreed to on certain conditions by the Imperial Government in 1855, and an Act was passed by the Provincial Government on the 30th of May, 1855, authorizing His Excellency the Governor General to accept the transfer by an Order in Council. This Order in Council was passed on the 25th of January, 1856, and was ratified by the Act of the Provincial Parliament, 19 Vic., cap. 45, on the 19th of June, 1856.

These canals were placed under the control of the Department of Public Works, by an Order in Council dated the 3rd of March, 1857, and have been maintained at the expense of the Province since the 1st of October, 1853, at a cost of $617,116.15, inclusive of $3,146.58 for the Rideau canal survey, up to the 1st of July, 1867.

For further information concerning transfer of Ordnance canals to Provincial Government—see Appendices Nos. 58, pages 444 to 447 and No. 60, pages 449 and 450.

For details of expenditure from 1st October, 1853, to 1st of January, 1857—see Appendix No. 60, pages 449 and 450.

For details of expenditure under Department of Public Works, from 1st of January, 1857, to 1st of July, 1867—see Appendix No. 61, at page 451.

THE "CARILLON" CANAL.

Length of Canal	2½	miles.
Number of locks	3	(two rising—one falling.)

Dimensions of locks:—Lift Lock, No. 1	128	feet	×	32½	feet.
Do No. 2	126½	"	×	32½	"
Guard Lock, No. 3	126½	"	×	32¼	"
Total lockage	34¾	"		21¾ 13	upwards. downwards.
Depth of water on sills	6	"			
Breadth of Canal at bottom	30	"			
Breadth of Canal at surface	50	"			

From the lock at "Ste. Anne," to the foot of the "Carillon" canal, boats pass through the Lake of "Two Mountains," and up the Ottawa River for a short distance; the river being here confined to its natural bed.

The distance from "Ste. Anne" Lock to the foot of the "Carillon" Canal, following the line of navigation, is 27 miles.

The "Carillon" Canal overcomes the "Carillon" Rapids, and is constructed on the northern bank of the river. (See Diagrams Nos. II and VII.)

To avoid an expensive excavation, the projectors of this canal made a summit level and supplied it with water from a neighboring tributary of the Ottawa, called the "North River." The length of the feeder is $\frac{62}{100}$ of a mile. The locks are of cut stone and substantially built. This canal was executed for the Imperial Government, under the direction of the "Royal Staff Corps;" and, though designed in 1819, was not commenced till some years later.

It was first intended that the dimensions of the locks should be the same as those of the old Lachine Canal, viz., 108 feet long by 20 feet broad; but in 1828, when it was decided that the locks in the Rideau Canal should be made of sufficient breadth to accommodate steamboats measuring 30 feet over the paddle boxes, it was determined that the locks of the "Carillon" should be built on this enlarged scale.

The expenditure by the Department during the past year on the Carillon, the Chute à Blondeau and the Grenville Canals is kept under an account headed, the "Carillon and Grenville Canals." See Statement No. 5, Appendix No. 1, at page 6.

For statement of annual expenditure for repairs and working expenses on Canal from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 329.

For total expenditure by the Department from 1st January, 1857, to 30th June, 1867—see Appendix No. 61, at page. 451.

For expenditure on this canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 484.

For statement of property leased on this canal—see Appendix No. 25, at page 308.

For a detailed description of the present condition of the works—see Appendix No. 3, pages 34 and 35.

For a description of the works executed on this canal during the year ending the 30th of June, 1867—see Appendix No. 30, pages 336 and 340.

For depth of water on sills of locks at upper and lower entrance of Canal—see Appendix No. 46, at page 389.

For dates of opening and closing of navigation—see Appendix No. 47, at page 398.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices No. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

THE "CHUTE À BLONDEAU" CANAL.

Length of Canal	⅛ of a mile.
Number of locks	1.
Dimensions of lock	130⅚ feet × 32⅚ feet at upper end, and 36⅛ feet at lower end.
Total rise of lockage	3¾ feet.
Depth of water on sills	6 "
Breadth of Canal at bottom	30 "
Breadth of Canal at surface	30 "

The distance from the head of the "Carillon" Canal to the foot of the "Chute à Blondeau" is four miles.

This Canal lies on the north shore of the Ottawa, and, as its name indicates, avoids the "Chute à Blondeau." It is cut through solid rock, and has a single lock. (See Diagrams Nos. II and VII.)

It was designed by the "Royal Staff Corps," at the same time as the "Carillon" Canal, in 1819, and was commenced a few years later; the dimensions of its lock, originally fixed at 108 × 20, were subsequently increased, as in the case of the "Carillon."

The expenditure by the Department on the Carillon, the Chute à Blondeau and the Grenville Canals is kept under an account headed, the "Carillon and Grenville Canals." See Statement No. 5, in Appendix No. 1, at page 6.

For statement of annual expenditure for repairs and working expenses on Canal, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 329.

For total expenditure by the Department from 1856 to 30th June, 1867—see Appendix No. 61, at page 451.

For expenditure on this Canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 484.

For a detailed description of the present condition of the works—see Appendix No. 3, pages 35 and 36.

For a description of the works executed on this canal during the year ending the 30th of June, 1867—see Appendix No. 30, pages 336 and 340.

For depth of water on upper and lower mitre sills of Lock—see Appendix No. 46, at page 390.

For dates of opening and closing of navigation—see Appendix No. 47, at page 398.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

THE GRENVILLE CANAL.

Length of Canal			5¾ miles.	
Number of locks			7.	
Dimensions of locks:—Lift Lock, No. 5	Combined		130⅔ feet	× 32⅙ feet.
" " No. 6			128⅓ "	" 32⅓ "
" " No. 7	do.		128⅓ "	" 31⅚ "
" " No. 8			128 "	" 32⅙ "
" " No. 9			107⅔ "	" 19 "
" " No. 10			106⅚ "	" 19¼ "
Guard Lock, No. 11			107$\frac{5}{12}$ "	" 19$\frac{1}{12}$ "
Total rise of lockage			45¾ "	
Depth of water on sills			6 "	
Breadth of Canal at bottom			20 to 30 feet.	
Breadth of Canal at surface of water			25 to 60 "	

From the head of the "Chute à Blondeau" Canal to the foot of the Grenville Canal the distance is 1⅜ mile. (See Diagrams Nos. II and VII).

This canal lies on the north shore of the river and carries navigation round the "Long Sault" Rapids. It is excavated partly through solid rock, and partly through earth. The locks are of cut stone. It was designed and commenced by the "Royal Staff Corps," for the Imperial Government, in 1819; but owing to the limited amount appropriated to this work each year, its progress was very slow. As in the "Carillon" and "Chute à Blondeau" Canals, the original design contemplated locks, corresponding in size to those of the Lachine Canal. Three of the locks were commenced and completed on these dimensions; but, in 1828, the enlarged scale of the Rideau locks was adopted for the four remaining.

All records relating to the establishment of these three Canals—the "Carillon," the "Chute à Blondeau" and the "Grenville," were kept in the Ordnance Office at Montreal, and were destroyed by fire in 1852. It appears, however, from information given by the parties engaged in the construction of the works, that the "Grenville" Canal was completed in 1829, the "Chute à Blondeau," in 1832, and the "Carillon," in 1833, and further, that on the 24th of April, 1834, the Canals were opened and the steamer "St. Andrew," with two barges in tow, made the first passage through them.

The scale of the navigation, and the capacity of the Ottawa route from Montreal to Kingston, are limited by the dimensions of the three small locks at the upper end of the "Grenville" Canal, which can only admit vessels of about 95 feet in length by 18½ feet in breadth, and by the depth of the Rideau Canal, which will only admit vessels drawing 4½ feet of water.

The expenditure by the department on the Carillon, the Chute à Blondeau and the Grenville Canals is kept under an account headed, the "Carillon and Grenville Canals." See Statement No. 5, Appendix No. 1, at page 6.

For statement of annual expenditure for repairs and working expenses on Canal from 1st January, 1860 to 30th June, 1867—see Appendix No. 28, at page 329.

For total expenditure by the department, from 1856 to 30th June, 1867—see Appendix No. 61, at page 451.

For expenditure on this work before and since the Union, from Government and other funds—see Appendix No. 70, at page 484.

For a detailed description of the present condition of the works—see Appendix No. 3, pages 36 to 38.

For a description of the works executed on this canal during the year ending the 30th of June, 1867—see Appendix No. 30, pages 336 and 340.

For depth of water on sills of locks at upper and lower entrance of Canal—see Appendix No. 46, at page 391.

For dates of opening and closing of navigation—see Appendix No. 47, at pages 398, 399.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

RIDEAU CANAL.

Length of Canal	126¼	miles.	
Number of locks	47		In going from Ottawa to Kingston, 33 ascend, 14 descend.
Total lockage	446¼	feet.	282¼ rise, and 164 fall. at high water.
Dimensions of locks	134	"	× 33 feet.
Depth of water on sills	5	"	(Navigable depth through canal, 4½ ft.)
Breadth of canal at bottom	60 54	" "	in earth. in rock.
Do at surface of water	80	"	in earth.

The river Ottawa, above Grenville, at the head of the Grenville Canal, is navigable for a distance of 56 miles to Ottawa City, which lies at the foot of the Chaudière Falls. The Rideau Canal, commencing at Ottawa City and terminating at Kingston, at the foot of Lake Ontario, connects the Ottawa River with the St. Lawrence and the lakes. (See Diagrams Nos. II and VII.)

Distance from Montreal to Ottawa, by water			120 miles.
Do	do	Kingston, by the St. Lawrence	178 "
Do	Ottawa to Kingston, by Rideau Canal		126½ "

The Rideau Canal was constructed for military purposes, and might perhaps be more properly called the "Rideau and Cataraqui Navigation," than a Canal, in the ordinary acceptance of the term; since it consists in the conversion of the Rideau and Cataraqui Rivers, (two obstructed and rapid streams spreading occasionally into deep ponds and lagunes) into one continuous navigable channel.

The Rideau River drains an area of 1550 square miles, and discharges itself over an abrupt and perpendicular fall of about 45 feet, into the Ottawa, at Ottawa City, rendering an artificial entrance to its waters, by Canal, absolutely necessary, to connect it with the Ottawa River for navigable purposes.

The Cataraqui discharges into the St. Lawrence at Kingston, draining a basin of 200 square miles.

Ascending the long sweeping course of the Rideau River for a distance of 86 miles, we are brought to its head waters, at a point which happens to lie within one mile of an absolute straight line drawn between Ottawa City and Kingston; and from thence, crossing a short portage of one mile, we find ourselves at the head waters of the Cataraqui—and descending the winding course of that river for 40 miles we are led into the waters of Lake Ontario at Kingston.

The Rideau River, as it approaches the Ottawa, maintains a high level; and flows in a deep bed, with a comparatively gentle current, to the very edge of a rocky cliff overhanging the Ottawa; and, as we observed before, plunges over a perpendicular fall of about 45 feet into that river.

Owing to this peculiarity of the Rideau, advantage had to be taken of a ravine about one mile further up the Ottawa, and a Canal was made to ascend this ravine by means of eight locks, joining the Rideau River some 2 miles inland.

The works in the whole distance from Ottawa to Kingston consist of a series of dams elevating the waters. There are 24 of these dams, 11 of which are of cut stone, and the remainder of wood and clay.

The stone dams are from 5 to 60 feet in height, and those of wood and clay are from 6 to 45 feet.

There are 24 waste and regulating weirs, nine of which are of stone, and the total length of the short canals, not including the locks, is 16½ miles. The Canal has no tow path.

The following list will complete the description of this Canal :—

Number of Station.	Name of Station.	Distance from Ottawa.	Locks.			Dams.			Length of Artificial Canal at each Station, in Miles.
			No.	Lift at Low Water.		No.	Length.	Height.	
		miles.		ft.	in.		ft.	ft.	
				Rise.					
1	Ottawa	0	8	82	0	3	230 1,320 1,616	18 33 14	4.00
2	Hartweil's	4¼	2	22	0	.....	100	28	
3	Hogsback	5½	2	13	6	1	320	60	
4	Black Rapids	9½	1	10	0	1	300	12	0.13
5	Long Island	14¾	3	27	0	3	850	68	0.13
6	Burritt's	40¾	1	10	6	1	240	14	1.50
7	Nicholson's	43¾	2	15	2	1	500	9	0.50
8	Clowes	44½	1	10	6	1	481	16	0.05
9	Merrickville	46¾	3	25	0	1	150	6	0.33
10	Maitland's	55	1	4	9	1	270	8	0.13
11	Edmonds	59½	1	10	10	1	343	8	0.06
12	Old Slys	60½	2	15	6	1	250	20	0.25
13	Smith's Falls	61½	4	33	9	2	600	24	0.13
14	First Rapids, or Poonamalie	64	1	7	9	1	260	5	1.25
15	Narrows	83¼	1	4	0	1	600	9	0.06
	Total Rise at Low Water	....	......	292	3				
				Fall.					
16	Isthmus	87½	1	4	0	......	....	....	1.25
17	Chaffey's	92	1	12	6	......	....	....	0.13
18	Davis	94¼	1	9	0	1	300	15	0.06
19	Jones' Falls	97¼	4	60	0	1	300	60	0.25
20	Brewer's Upper Mills	108¼	2	19	0	1	200	20	1.75
21	do Lower Mills	110	1	14	2	1	200	12	4.25
22	Kingston Mills	120¼	4	46	8	1	6,042	14	0.25
23	Kingston	126¼	.....	....		......	....	....	... .
	Total Fall at Low Water	....	.... .	165	4				
	Total	....	47	....		24	15,472	....	16.46

The construction of this canal was first taken into consideration in 1814, immediately after the close of the war; and in 1815, Col. Nichols, then commanding the Royal Engineer corps in Canada, was directed to send an officer to report on the practicability of a water communication between Lower Canada and Kingston by the Ottawa and Rideau Rivers.

Capt. Jebb, R.E., the officer detailed on this service, examined two lines.

Entering the Cataraqui River from Kingston, on Lake Ontario, he ascended to its source; then, seeking the head waters of the Rideau, he descended that river to where it falls into the Ottawa. Turning back, he ascended the Rideau again for some 55 miles. Leaving the Rideau on his right at this spot, he entered the mouth of Irish Creek, and penetrated to its source. Then, crossing a short summit, he descended white Fish Creek, into the Cataraqui river. This creek falls into the Cataraqui some 29 miles above Kingston.

On his return, Capt. Jebb reported that a water communication between the proposed points was practicable, and expressed a preference for the Irish Creek route, as being the shortest.

Nothing further was done in reference to the work until 1821, when the Legislature of Upper Canada passed an Act, authorizing the appointment of Commissioners to report on the internal navigation of Canada.

The Commissioners, under this Act, employed Mr. Samuel Clowes, as their engineer and in 1824, the Imperial Government having offered a loan of £70,000 stg. ($340,666.67) towards the construction of a canal between Kingston and Ottawa, Mr. Clowes was instructed to make a survey of the projected work. This gentleman examined the two routes that had been explored by Capt. Jebb, and having ascertained that the summit level of the Irish Creek route could not be supplied with a sufficient quantity of water, he recommended the adoption of that line which proposed to follow the Rideau and Cataraqui Rivers through their whole length.

He submitted plans for three sizes of Canals:—

1st. For a Canal 7 feet deep, with locks 100 × 22 feet.
2nd. For a Canal 5 feet deep, with locks 80 × 15 feet.
3rd. For a Canal 4 feet deep, with locks 75 × 10 feet.

In 1825, the Committee to whom these reports had been submitted, recommended that the plan proposing a depth of 5 feet water should be adopted.

The reasons given for such limited dimensions, were, that the canal was to be used chiefly for military purposes; and that a canal larger than would be necessary to transport, with convenience, all descriptions of naval and military stores, would afford no additional security by being of larger dimensions; and further, that the question of supremacy on the lakes, would always be determined by the greater power of ship-building on the lakes themselves.

The Provincial Government of Upper Canada, feeling convinced that the continuation of the direct line of the St. Lawrence Canals, would offer greater commercial advantages than the circuitous route of the Rideau, declined the loan of £70,000 stg., ($340,666.67) proffered by the Imperial Government.

In 1825, a Committee, consisting of Col. J. C. Smith, Lieut. Col. Sir G. Hoste, and Major Harris, Royal Engineers, was sent out from England by the Imperial Government, and directed to report on the various Public Works of Canada; and to submit an estimate of the cost of the Rideau Canal. The locks were to be of the same dimensions as those of the Lachine and Grenville Canals, viz :—108 × 20, with a depth of 5 feet water.

This Committee estimated the cost of the Rideau Canal at £169,000 stg., ($822,466.67).

In consequence of this report, the construction of the Rideau Canal was determined upon by the Imperial Government at its own expense.

Lieutenant Colonel By, R.E. was sent out to superintend the works; he arrived in September, 1826, and on the 21st of the same month, the excavation for 10 locks was commenced.

The revision of the various schemes of canal that had been previously proposed, was at the same time undertaken by this officer; and in the autumn of 1827, he reported to the Imperial Government, that the probable cost of the canal with locks of 108 × 20, would be £474,000 stg., ($2,306,800) and recommended that he should be authorized to make the Canal with locks of 133 × 30 feet, and 5 feet depth of water.

A Committee of Engineers, appointed by the Board of Ordnance, rejected this proposition, and suggested wooden locks instead of stone for the 36 locks that remained to be made, and had not yet been contracted for.

These matters having been laid before the Board in England, the Marquis of Anglesea, then Master General of Ordnance, ordered the appointment of a Commission to be sent out to Canada, with authority to determine what plan should be pursued.

In the Spring of 1828, this Commission reached Canada; and was composed of Lieut. Col. Fanshaw and Lewis, to whom were added Sir James Kempt, Administrator of the Province of Lower Canada, as President.

The Commission made such recommendations as led to the adoption of the following dimensions for the locks, namely: 133 feet in length by 33 feet in breadth, with five feet of water on the sills, and for the channel a corresponding depth throughout its whole length from Ottawa to Kingston.

The estimated cost of these works was £576,757 stg., ($2,806,881.06); but in 1830, this estimate was increased to £762,679 ($3,711,704.47); Ordnance statements, however, show that the total cost of the works amounted eventually to £803,774. 5s. 6d. stg. ($3,911,700.80.)

On the 29th of May, 1832, the works being completed, a steamboat called the *Pumper*, passed through from Bytown to Kingston.

The method adopted in the construction of this Canal—that of retaining the waters of the Rivers by means of high dams—was economical, inasmuch as it resulted in the opening of a long line of communication, for a sum less than that which would have been required had the Canal been excavated in its whole length; but, at the same time, such a plan required that the whole of the works should be of the very best description. Every Engineer who has visited this line of navigation, has expressed the opinion that the works undertaken by the Imperial Government were executed in a very superior and substantial manner; but it must be admitted that it is in the very nature of Dams retaining heads of 40, 50 and 60 feet of water, to require that they should be kept in the very highest state of repair; and it cannot be too strongly insisted upon, that this high state of repair is, after all, the most economical mode of maintaining the Rideau navigation.

Serious accidents, involving the suspension of navigation for many months, and arising from failure in some of the dams and waste weirs, occurred in 1858–59 and 1862.

Another very important consideration in connection with the Rideau Canal, is its supply of water. At the period of its completion, the valleys of the Rideau and Cataraqui rivers were for the most part in a state of nature. The spring thaws and the summer rains were collected in vast adjacent swamps, and protected from evaporation by the shade of the forest trees, and from draining away by the accumulated *débris* of fallen timber.

But as the country became cleared and inhabited, it became the interest of every settler to drain his land, and thus to increase, year by year, the artificial facilities for the earliest escape of the waters in the spring; and the consequence is, that the height of the springflood increases every year, leaving the channels of the Rivers Rideau and Cataraqui, at an early season without a sufficient supply to keep up the required navigable depth.

To remedy this, the Department has had under consideration the propriety of retaining, by means of dams, in some of the small lakes lying near the summit levels, a portion of the spring waters to be kept in store for use during the summer months of low water.

But difficulties are thrown in the way, by owners of the land and mills on the shores of the lakes, who entertain extravagant ideas of the value of their property. It is a question, however, that must be solved sooner or later, and will become more complicated the longer it is delayed. It should be considered now as it will present itself when the whole country becomes thoroughly cleared and drained; and if nothing more is attempted, the lands which would be flooded by the proposed works should at least be secured.

For statement of expenditure by the Imperial Government, on this canal whilst under the management of the Ordnance Department, for construction, &c—see Appendix No. 7, at pages 66 and 67.

For statement of expenditure by this Department on this Canal for the year ending 30th of June, 1867—see statement No. 5, in Appendix No. 1, at page 6.

For annual expenditure, for repairs and working expenses on canal, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 329.

For total expenditure by the Department from 1856 to 30th June, 1867—see Appendix No. 61, at page 451.

For expenditure on this Canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 484.

For a statement of the water power and other property leased on this Canal—see Appendix No. 25, pages 304 and 305.

For a detailed description of the present condition of the works—see Appendix No. 7, pages 59 to 68.

For a description of the works executed on this Canal during the year ending the 30th of June, 1867—see Appendix, No. 35 pages 350 to 353.

For depth of water on sills of locks at upper and lower entrance of canal—see Appendix No. 46, at page 392.

For dates of opening and closing of navigation—see Appendix No.47, pages 398 and 399.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of olls,

&c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this canal—see Appendix No. 55, at page 432.

RIVER TAY.

The River Tay, which may be considered as a branch of the Rideau Navigation, falls into the Rideau at the foot of Lower Rideau Lake.

The Town of Perth is situated on this river about 8 miles above its mouth.

In the year 1831, a Company was incorporated with a capital of £4,000 ($16,000) for the improvement of the navigation of this river. The works were immediately commenced; and in 1834, were open for navigation.

They consist of five Locks, with dams and slides for passing timber,—four of the Locks are of stone, the remaining one, with the other works, is of wood. The company never declared any dividend, and the works are in a dilapidated state.

The locks are about 101 × 20 with four feet of water.

The Government of Upper Canada, during the Session of 1833-4, loaned the Company £1,000 ($4,000); and in 1836-7, £750 ($3,000).

The total cost of this work, so far as ascertained, up to 30th June, 1867, amounts to $17,764.05.—See Appendix No. 70, page 484.

TABLE showing the size of the smallest locks on the Canals of the Montreal and Kingston, *viâ* Ottawa, line of navigation, also the dimensions of the largest vessel which may pass through them.

Name of Canal.	Dimensions of Lock.			Dimensions of Vessel.			
	Length.	Breadth.	Depth of water on sills.	Length.	Breadth.	Draught of water when loaded.	Tonnage.
Carillon and Grenville.....	106⅔	19¼	5½	95	18½	5	100
Rideau..........................	134	32	5	110	31½	4½	250

THE RICHELIEU AND LAKE CHAMPLAIN NAVIGATION.

This third line of improvements was designed with a view of placing the St. Lawrence in communication with Lake Champlain, and the American system of canals which lead to the Hudson River and New York City.

The position of Montreal is nearly due North of New York City.

Boats leaving the Canadian waters for New York or any of the intermediate ports on this line, enter the mouth of the Richelieu River at Sorel, on the St. Lawrence, 46 miles below Montreal, and 114 miles above Quebec.

Ascending this river, the vessel's head points towards New York City, and, as may be seen on the map, the navigation throughout the whole of this route scarcely deviates from a straight line.

From the mouth of the Richelieu River, at Sorel, vessels ascend 14 miles to St. Ours, where they are lifted 5 feet; proceeding up the Richelieu 32 miles further, they enter the Chambly Canal, which, in a space of 12 miles, raises them by lockage 74 feet more; and after traversing 23 miles more of the Richelieu River, the vessels are brought to the Canadian Frontier, which is at a line crossing the outlet of Lake Champlain.

Following Lake Champlain through its whole length, the vessels next enter the Champlain Canal—an American work.

Passing through this and a few miles of the Erie Canal, they reach Albany, and thence entering upon the Hudson, they descend that river to New York City.

The total length of Canal Navigation between Montreal and New York on this route, is 85 miles; and the total lockage ascending and descending, is 283 feet.

The Champlain Canal was commenced by the State of New York, in 1817; and was opened for navigation in 1822. The dimensions of the locks were 90 feet × 15 with 4½ feet of water. This Canal is being enlarged since 1854,—the Locks according to the new scale, are to be the same as those of the Erie Canal 110 × 18, but the depth of water on the sills is to be only five feet.

TABLE OF DISTANCES IN STATUTE MILES.

SECTIONS OF NAVIGATION.	Intermediate Distances.	Total Distances from Montreal.
Montreal to Sorel	46	....
Sorel to St. Ours Lock	14	60
St. Ours Lock	....	60
St. Ours Lock to Chambly Canal	32	92
Chambly Canal	12	104
Chambly Canal to Province Line	23	127
Boundary Line to Champlain Canal	111	238
Champlain Canal to Junction with Erie Canal	64	302
Erie Canal from Junction to Albany	9	311
Albany to New York	145	456

ST. OURS LOCK AND DAM.

Length of Canal	⅛ mile.
Number of locks	1.
Dimensions of lock	200 feet 45 feet.
Total rise of lockage	5 "
Depth of water on sills	7 " at low water.

The lock and dam at this place retain the waters of the Richelieu River and give a depth of not less than seven feet as far as the lower entrance to the Chambly Canal.

As already stated, the position of this dam is 14 miles above the mouth of the Richelieu. At this point the river is divided into two deep channels by a small island. In the eastern channel a lock, in cut-stone, with a dam 300 feet in length, of earth work, has been constructed; and in the western channel, a dam of 600 feet in length, of crib work filled with stone has been made. (See Diagram No. V.)

These works raise the river from four to seven feet above its natural level.

The necessity of opening a slack water communication between the River St. Lawrence and Lake Champlain was freely discussed in the years immediately following the close of the war of 1812. Accordingly a bill was passed in 1818 by the Parliament of Lower Canada, granting to a Company the right of forming a Canal so as to connect the navigation of the lake with the basin at Chambly and avoid the Chambly Rapids. This basin is an expansion of the River Richelieu; it has deep water, and on the western side of it is situated the Village of Chambly, where also is located the entrance of the Canal, at a distance of about 46 miles from the mouth of the river.

The Act passed by the Legislature prescribed that the locks should not be less than 20 feet in breadth, and of a depth sufficient to admit vessels drawing five feet water. The capital of the Company was limited to £45,000 ($180,000), and the term within which the Canal was to be completed was limited to seven years.

The Company ordered the necessary surveys, and prepared three designs, with three different dimensions for a canal and its locks, and in 1821 submitted to Parliament, that the cost of even the smallest of these three canals would far exceed the capital authorized to be raised for the purpose. They therefore prayed for authority to increase the capital.

The matter appears to have been thoroughly considered by a Parliamentary Committee, who obtained the evidence of several naval and military officers.

The Committee reported that the breadth of the locks should not be less than 30 feet, with 5 feet depth of water, and expressed the opinion that the civil and military authorities should be empowered to take up such shares or portions of shares of the said canal as might be left unsold, and that a fund should be appropriated for that purpose.

In 1823, the works not having been yet commenced, it became evident that the Company would forfeit its rights under that clause in their Act, which prescribed that the canal should be completed within seven years.

A new Act was therefore passed appropriating £50,000 ($200,000) for the construction of the Canal. This Act fixed the breadth of the locks at 20 feet, with a depth of five feet. It provided for the appointment of a Commission and stipulated that the works should not be commenced until after the completion of the Lachine Canal.

The delays were a source of disappointment to the merchants of Quebec, and were the cause of a petition to the Legislature in 1826, praying that the Canal might be commenced immediately; but nothing was done in the matter until 1829, when the Commissioners were appointed in conformity with the Act.

These Commissioners were charged with the management, both of the works at St. Ours, and those of the Chambly Canal.

Immediately on their appointment, the Commissioners ordered an examination of the river by Mr. Fleming, C.E., who informed them that there were two modes of improving it. First, by raising the water by means of a dam. Secondly, by dredging its bed.

Having advised the latter plan, the Commissioners adopted it, and continued for two years, viz.:—during 1830 and 1831—to employ men by the day in raising the boulders and large stones from the bed of the river throughout the whole distance, extending from the present site of the dam to Chambly, in order to enable them subsequently to complete the channel by the use of the dredge.

The original appropriation of the Legislature, under which the preliminary works were carried on, was £7,950 ($31,800), and although at the close of the year 1831, there was still a balance of this sum unexpended, amounting to £4,000 ($16,000), nothing further was attempted until after the appointment of Mr. Hopkins, in March, 1835, as the Engineer of the Chambly Canal.

Mr. Hopkins commenced by revising the plans; he advised the abandonment of the project of deepening the river and recommended the construction of a dam, with a cut-stone lock, at a point about 33 chains above the large island at St. Ours.

The Commissioners approving his suggestion, received tenders, and entering into a provisional contract for the execution of the work, applied to Parliament for an additional grant.

A Bill authorizing an appropriation of £9,500 ($38,000), in addition to the unexpended balance of £4,000 ($16,000) passed both Houses; but it did not receive the Royal sanction.

After the Union of the Provinces, the Department of Public Works (then called the Board of Works), caused new surveys to be made, and approved the plan of a lock and dam, but selected a different location from that proposed by Mr. Hopkins.

The works were commenced in 1844, and after some interruption in 1846, from the failure of the first contractors, they were completed in the middle of September, 1849.

In the spring of 1849, during 26 days, the high water overflowed the coping of the lock; this difficulty was overcome by raising the lock-walls five feet higher in 1851.

The expenditure by the Department on the construction of this work since the union in 1841, up to the 30th of June, 1867, as shown in Appendix No. 1, at page 3, is $121,537.65

In the public accounts the St. Ours and Chambly Canals are kept under one head. In these accounts the amount charged to these two works up to the 30th of June, 1867, is $433,807.

For statement of annual expenditure for repairs and working expenses, from 1st January, 1860, to 30th June, 1867—see Appendix No. 28, at page 328.

For the statement of water power leased at this place, see Appendix No. 25, at page 310.

For expenditure on this canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 485.

For a detailed description of the present condition of the works—see Appendix No. , pages 28 to 30.

For a description of the works executed here during the year ending the 30th of June, 1867—see Appendix No. 30, at page 334.

For depth of water on the lower mitre sill of the St. Ours Lock—see Appendix No. 46, at page 387.

For dates of opening and closing of navigation—see Appendix No. 47, at page 397.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendices Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this lock—see Appendix No. 55, at page 432.

CHAMBLY CANAL.

Length of Canal	12 miles.	
Number of locks	9	
Dimensions of locks :—		
Guard lock, No. 1, at St. John	122 feet	× 23½ feet.
Lift. " No. 2	124 "	× 23 7/12 "
Do locks, Nos. 3, 4, 5, 6	118 "	× 23 to 237 feet.
Do " Nos. 7, 8, 9, combined	125 "	× 23¾ feet.
Total rise of lockage	74 "	
Depth of water on the sills	7 "	
Breadth of Canal at bottom	36 "	
Do surface	60 "	

This Canal being an extension of the navigation afforded by the St. Ours Dam, has been already referred to under the account given of that work; and, as is there shown, extends from Chambly Basin, which is the head of the slack water afforded by the St. Ours Dam, up to St. John, a town 12 miles further up the Richelieu river; that river being navigable from thence to the lake. (See Diagrams Nos. II and V.)

The Chambly Canal lies on the west bank of the river, and its locks are of cut stone.

The particulars of the formation of a Company in 1818, for the purpose of constructing this Canal, and the causes which led to its suspension in 1823, have been already narrated under the head of "St. Ours Lock and Dam."

On the appointment of the Commissioners in 1829, the necessary surveys were immediately proceeded with; and in Oct. 1831, the works were commenced by contractors, who undertook to complete the whole for £46, 218 ($184,872.)

In 1833, the Commissioners obtained authority to increase the size of the locks from 100 × 20 to 120 feet in length by 24 feet in breadth.

The works had been taken by the Contractors at very low prices, and much trouble and confusion ensued. The Commissioners, from time to time, made some advances to the Contractors, but to no purpose; and in the autumn of 1835 the works were entirely suspended.

The Canal, however, was in such a state of forwardness, that boats could come from Lake Champlain to Chambly, and could have passed beyond, if the locks at this village had been finished.

The Commissioners reported these circumstances to the Government, and stated that the £50,000 ($200,000) originally appropriated, together with a subsequent appropriation of £16,000 $64,000) had been all expended; and that a further sum of £28,000 ($112,000) was required to finish the Canal.

A Bill granting this sum was passed through both Houses, in the Session of 1835–36, but did not receive the Royal Sanction.

In the years 1836–37, 38 and 39, the works were only maintained by means of small sums of money advanced to the Commissioners by the Government, in anticipation of future grants.

In 1840, the Commissioners having been authorized to borrow a sum of £35,000 ($140,000), the works were fully resumed; but owing to further difficulties with the Contractors very little progress was made during this year

In 1841, the Department of Public Works for the United Provinces was formed, and at once assumed the charge of this canal. Immediate steps were taken to complete it, and in the spring of 1843, it was opened throughout. The works, however, were found to have been executed in a very imperfect manner. The side walls of the locks were too thin, and of inefficient material; and the excavation was irregular in shape and not of sufficient depth.

The irregularities in the excavation were remedied during the winter of 1850, and by raising the banks, during the ensuing summer, a navigable depth of seven feet of water was obtained.

The failing condition of the lock walls was repeatedly pointed out, and the necessity of reconstructing all the locks was frequently urged between the years 1851 and 1857; but the Government had under consideration at that time the expediency of either enlarging the canal, or closing it and adopting a new line altogether. At length, in 1858, it appeared that the repairs could no longer be postponed without an entire stoppage of the navigation, and they were therefore executed.

The works have since then been maintained in working order.

The expenditure by the Department on the construction of this canal since the Union in 1841 up to the 30th of June, 1867, as shown in Appendix No. 1, at page 3, is $69,758.01.

As already stated the St. Ours and Chambly Canals are kept under one head in the public accounts. It there appears that the total amount charged to these two works, up to the 30th of June, 1867, is $433,807.08.

The total cost of these works, from their commencement to the 30th June, 1867, as shown by Appendix No. 70, page 485, is $756,249.41 of which $634,711.76 were expended on the Chambly Canal, and the balance, $121,537.65 on the St. Ours works as already stated.

For statement of annual expenditure for repairs and working expenses on this Canal, from 1st January, 1860, to 30th June 1867—see Appendix No. 28, at page 329.

For expenditure on this canal before and since the Union, from Government and other funds—see Appendix No. 70, at page 485.

For statement of water power and other property leased on this canal—see Appendix No. 25, at page 310.

For a detailed description of the present condition of the works,—see Appendix No. 3, pages 30 to 33.

For a description of the works executed on this canal during the year ending the 30th of June, 1867,—see Appendix No. 30, pages 334 and 335.

For depth of water on the upper sill of Guard Lock at St. John.—see Appendix No. 46, at page 387.

For dates of opening and closing of navigation,—see Appendix No. 47, at page 397.

For number of vessels and passengers which passed through the canals in 11 years, between 1857 and 1867—see Appendicee Nos. 65, 66, pages 471 to 473, also No. 48, pages 401 to 418.

For gross and net revenue derived from the canals,—tonnage of vessels and merchandise which passed through,—cost of maintenance, management, collection of tolls, &c., for 11 years, between 1857 and 1867—see Appendices Nos. 63, 64, pages 454 to 470, and No. 67, pages 474, 475.

For proclamations respecting tolls and regulations on this Canal—see Appendix No. 55, at page 432.

TABLE showing the sizes of the smallest Locks on the canals of the Richelieu and Lake Champlain line of navigation to New York, also the dimensions of the largest vessel which may pass through them.

Name of Canal.	Dimensions of Lock, in Feet.			Dimensions of Vessels, in feet.			
	Length.	Breadth.	Depth of water on sills.	Length.	Breadth.	Draught of water when loaded.	Tonnage.
U. S.—Erie Canal...........	110	18	7	102	17½	6	210
U. S.—Champlain Canal..	97	14	4	89	13½	3½	70
Chambly Canal.......... ...	122	23½	7	114	23	6½	230

SURVEY OF A PROJECTED CANAL BETWEEN THE ST. LAWRENCE AND LAKE CHAMPLAIN.

In 1847, Messrs. John Young, L. H. Holton, and other leading merchants of the City of Montreal, memorialized His Excellency the Earl of Elgin, then Governor of Canada, and represented that it was their intention to apply to the Legislature for a Charter to construct a canal to connect the St. Lawrence with Lake Champlain, near St. John, and they prayed, in the meantime, that His Excellency in Council would order a survey of the proposed work.

The object of the memorialists, in desiring the construction of this canal, was to open a cheap line of water communication between Canada and the Eastern States. It was expected that this Canal, besides leading to the extension of the Canadian trade, would become the highway in connection with the St. Lawrence for produce from the West to the Eastern States. (See Diagram No. V.)

The project presented by the memorialists was a bold one, and had many good points in its favor. Its merits were fully discussed, both by the engineers who were instructed to make a special study of the subject, as well as by several of my predecessors in office, in their annual reports.

The object of the present report being more to give an account of the past than to look into the future, no attempt will be here made to give even a synopsis of the arguments advanced for or against the projected work.

His Excellency the Earl of Elgin having acceded to the prayer of the memorialists, Mr. J. B. Mills, Civil Engineer, was instructed to make the required survey, and on the 19th February, 1848, he reported :

That in his opinion the upper terminus of the canal should be at St. John, the present head of the Chambly Canal; and that although the River Richelieu, from St. John to Lake Champlain, a distance of 21 miles, was not sufficiently deep in its whole length, it could be easily made so, at a trifling expense.

In discussing the question as to the site of the terminus on the St. Lawrence, Mr. Mills ascertained that the level of Lake Champlain was 73½ feet above the St. Lawrence, opposite Montreal; and that the fall of the St. Lawrence between Lachine and Montreal, was 44½ feet; on this he based his statement, that on the one hand, if the projected canal had its terminus at or opposite Montreal, a boat coming from the upper St. Lawrence and going to Lake Champlain, would descend 44½ feet through the Lachine Canal, and rise 73½ feet through the projected canal, giving a total lockage of 118 feet for the one passage.

Whilst on the other hand, if the projected terminus was at a point of the St. Lawrence above the Lachine Canal, the total lockage would only be the absolute difference of level between Lake Champlain and the St. Lawrence above the Lachine Canal, namely, 29 feet.

Mr. Mills, therefore, gave it as his opinion, that the terminus on the St. Lawrence should be above Lachine; and he selected a point near the village of Caughnawaga, immediately opposite Lachine, about 8 miles above Montreal.

He next ascertained that in the direction of a straight line between St. John and Caughnawaga, there occurred certain high lands, he therefore stated that two modes of forming the canal suggested themselves.

The first was—by enlarging the present Chambly Canal from St. John for 8⅞ miles toward Chambly, then following the low lands so as to allow the new canal to be supplied with water from Lake Champlain, and then to descend by three locks into the St. Lawrence, at or near Caughnawaga.

The second line indicated was a more direct one, but with a summit level supplied with water from a higher source by a feeder.

Mr. Mills recommended the first line supplied from Lake Champlain; he stated that the length of the canal, including the 8¾ miles of the enlarged Chambly, would be 32½ miles, and proposed that the locks should be 200 × 45 with 9 feet water on the sills. He estimated the cost of the proposed work at £453,602 ($1,814,408).

In 1852, the Commissioner of Public Works, in his annual Report, strongly advocated the making of this Canal; and in 1854, Mr. J. B. Jarvis, Civil Engineer, was instructed to report on the projected work, both from an Engineering and a Commercial point of view.

Mr. Jarvis reported on the 13th February, 1855, reviewing the commercial relations between the United States and Canada, as well as between the Eastern and Western portion of the Republic; he also considered the means of transport at the command of the American people, compared with the St. Lawrence and the Canadian Canals, and concluded by advising the construction of the contemplated Canal.

Mr. Jarvis examined four lines, and approved of the port of St. John as the proper terminus on Lake Champlain.

By the first he proposed to follow the present route, passing by Sorel up the Richelieu, raising the St. Ours Dam and enlarging the Chambly Canal.

By the second he proposed that the St. Lawrence terminus should be at Longueuil, immediately opposite the Lower end of Montreal.

The third line left the St. Lawrence at Caughnawaga, and contemplated the two modes of accomplishing the work suggested by Mr. Mills in 1847; namely, the one at the Lake Champlain level, and the other with a summit level of 37½ feet above that Lake, and supplied with water from Beauharnois Canal by means of a feeder 16 miles in length.

And lastly by the fourth plan he projected a Canal with entrances also at Caughnawaga and St. John; and as proposed by the third project, a summit level 37½ feet above Lake Champlain, and supplied with water from the Beauharnois Canal through a navigable feeder.

Mr. Jarvis advised the execution of his fourth plan, and proposed that all the Locks should be of cut stone, 230 feet in length, by 36 feet in breadth; and with sufficient depth to admit vessels drawing 10 feet water. He estimated the cost of this work at $4,267,890

In 1855, Mr. S. Gamble, Civil Engineer, acting under instructions from the Department, reviewed the conclusions arrived at by Mr. Jarvis; and gave various reasons for advising the adoption of the Lake Champlain level as first suggested by Mr. Mills—enlarging 8¾ miles of the Chambly Canal, and following the low lands so as not to require a summit reach. He also recommended that the Locks should be made 45 feet broad as on the St. Lawrence Canals, instead of 36 feet as recommended by Mr. Jarvis.

Mr. W. H. Swift, Civil Engineer, of Boston, was also consulted in the summer of 1855; and he recommended, in a report dated June 6th, 1855, the line proposed by Mr. Mills.

Lastly, in January, 1856, Mr. Gamble reported that in pursuance of instructions from the Department of Public Works, he had examined the Country lying between Lake Champlain and Lake St. Francis, above the Beauharnois Canal; and that its formation was not favorable to the construction of a Canal.

Since this last Report, no further Departmental action has been taken upon this subject.

RIVER TRENT AND NEWCASTLE DISTRICT.

The Public Works on the River Trent, and on the inland waters of the Newcastle District, consist of certain locks and dams designed to improve the navigation of these waters; and of slides, dams, and booms made to facilitate the descent of timber.

In earlier times, it was thought that a line of navigation might with advantage be opened between Lake Ontario and Lake Huron by means of the River Trent and the rivers and lakes of the Newcastle District, so as to afford accommodation to the local traffic, and shorten the distance by water between Lake Ontario and the far West.

The Trent is a large river, which discharges into the Bay of Quinté, at a point about 67 miles above Kingston; and in passing from Lake Ontario to Lake Huron by this proposed route, a vessel would ascend the River Trent, Rice Lake, the Otonabee River, Clear Lake, Buckhorn Lake, Chemong Lake, Pigeon Lake, Sturgeon Lake, Cameron's Lake, and Balsam Lake which is the summit and has an elevation of 589⅓ feet above Lake Ontario; thence descending 118½, by a Canal and the Talbot River, to Lake Simcoe, and 124⅚ by the River Severn, it would enter the Georgian Bay (Lake Huron), 243⅓ feet below the summit level of Lake Balsam. Thus, the total rise and fall between Lakes Ontario and Huron by this route would be 832⅔ feet.

This line of navigation, if ever completed, would be extremely crooked, for the actual distance in a straight line from the mouth of the Trent on Lake Ontario to the mouth of the Severn on Lake Huron, is 112 miles, while by following the proposed line, the distance to be run by boats would be 235 miles.

But though the course through these inland waters be so crooked, its general tendency is nevertheless in a direct line drawn from the foot of Lake Ontario to the point of juncture of the great upper lakes, Huron, Michigan and Superior.

Thus a boat going from Kingston, at the foot of Lake Ontario, to the Straits of Mackinaw (the point of junction of the three upper lakes), would traverse a distance of 785 miles if it followed the line through Lake Ontario, Welland Canal, Lakes Erie, Ste. Claire, and Huron; while if, in going to the same point, it followed the Trent and Newcastle line, Georgian Bay and Lake Huron, it would only pass over a distance of 567 miles. (See Diagram No. VI.)

The improvement of a portion of the main line, extending from the mouth of the River Trent to Lake Sturgeon on the proposed route, was commenced some years ago; as also the improvement of a branch line from Lake Sturgeon to Lake Scugog.

The following Table will show the relative position of the navigable and unnavigable portions of the Rivers and Lakes extending from the mouth of the River Trent to the head of Lake Scugog. The distances are measured on the plans prepared by Mr. Baird in 1835 and 1836.

NAMES OF PLACES.	Length of River and Lakes, in miles.		Total distance in miles.
	Navigable.	Unnavigable.	
From the mouth of the Trent to the foot of the Nine Mile Rapids......	1	....	1
From the foot of the Nine Mile Rapids to the head of the same..........	....	8	9
From the head of Nine Mile Rapids to the foot of Canal at Chisholm's Rapids	6	....	15
The Canal at Chisholm's Rapids..	½	....	15½
From the Canal at Chisholm's Rapids to Percy Landing..................	13	....	28½
From Percy Landing to the foot of Crow Bay..................................	....	9½	38
From foot of Crow Bay to junction of Crow and Trent Rivers..............	3	....	41
From junction to the Lower Slide at Heely's Falls............................	....	1¼	42¼
Lower Slide and Upper Slide at Heely's Falls..................................	....	½	42¾
From Upper Slide at Heely's Falls to Canal at Crooks' Rapids...........	11¾	....	54½
The Canal at Crooks' Rapids..	⅛	....	54⅝
From Canal at Crooks' Rapids to Canal at Whitlas' Rapids	38¼	....	92⅞
The Canal at Whitlas' Rapids..	⅛	....	93
From the Canal at Whitlas' Rapids to the head of Little Lake at Peterborough	1	....	94
From the head of Little Lake to the Slides and Dams at Buckhorn Rapids	12½	18½	125
Buckhorn Slide [sixty-five feet long]...			
From Slide and Dam at Buckhorn Rapids to Canal at Bobcaygean Rapids	15¾	....	140¾
The Canal at Bobcaygean Rapids..	¼	....	141
From the Canal at Bobcaygean Rapids to the Slide at the Town of Lindsay (formerly Purdy's Mill on the River Scugog).................	20¼	....	161¼
The Slide at Lindsay..	sixty-five	feet long.	
From the Slide at the Town of Lindsay to the head of Lake Scugog.....	28¾	....	190
Total..	152¼	37¾	

For further details respecting rise of river and lakes above the Bay of Quinté—see Appendix No. 15, at page 122.

In 1827, on a petition from Mr. Stewart and others relative to the navigation of the waters of the Newcastle district, a Committee of the Lower House of the Legislature of Upper Canada reported, that it was "exceedingly desirable and important that those waters which constitute the chain of lakes and rivers which run in a south-easterly direction from the vicinity of Lake Simcoe, and which empty into the Bay of Quinté by the River Trent, should be examined and surveyed by competent persons, with a view to ascertain how far they might be rendered navigable, and the probable expense attending the same."

Nothing, however, appears to have been done before Feb., 1833, when a Bill was passed appointing Commissioners to receive plans and to execute the works necessary to the improvement of the inland waters of the Newcastle district, commencing at the mouth of the Otonabee River, which discharges into Rice Lake, and extending to Lake Scugog; and the Commissioners were authorized to raise a loan of £2,000 ($8,000) for this purpose.

This Commission obtained a design for a short canal at Bobcaygean, with a wooden lock. It was commenced in 1833 and completed in 1835. The length of the Canal was 973 feet, and the lock was 119½ feet long by 28 feet broad, with 4¾ feet water on the sills at low water, and 7½ feet at high water.

This lock permitted vessels navigating Lakes Chemong, Buckhorn and Pigeon, which are on the same level, to ascend into Sturgeon Lake, and thence up the Scugog River as far as Lindsay.

It also appears that the Commissioners effected a slight clearing of the River Otonabee, below Peterborough.

Notwithstanding this commencement of the works by the Commissioners, it seems to have been well understood at the time that the small wooden lock thus executed was only a temporary expedient. and that works on a much larger scale with stone locks and on a comprehensive plan, extending from Lake Ontario to Lake Huron, would be ultimately undertaken; for we find that, in 1833, the Lieutenant-Governor was pleased to instruct Mr. N. H. Baird to make a survey of the section extending from the mouth of the Trent to Rice Lake, and to estimate the cost of rendering these waters navigable for vessels drawing five feet, the locks to be 134 feet long by 33 feet broad.

Mr. Baird reported, in November of the same year (1833), that the distance from the mouth of the Trent to the foot of Rice Lake was 61 miles, and that the obstructions to Navigation were as follows:—

1st., At the nine-mile Rapids,

2nd., At Chisholm's,

3rd., At a succession of Rapids and Falls between Percy Landing and Crow Bay, a distance of 12½ miles.

4th., At Heely's Falls.

5th., At Crooks' Rapids.

He proposed to overcome the Nine-mile Rapids by 13 locks, the Chisholm's by 1 lock, the 12½ miles of Rapids and Falls by 14 locks, Heely's Falls by 8 locks, and Crooks' Rapids by 1 lock,—forming a total of 37 locks, with 18 dams and 4¾ miles of side cuts, &c., the locks to be of stone; and the estimated cost of the whole works was £233,447 6s. 11½ ($933,789.39½).

The survey of the second section of the line was only commenced in 1835; when, in compliance with an Address from the House of Assembly, dated April 16th, 1835, His Excellency, Sir John Colborne, appointed Mr. Baird "to examine the most eligible route for a Canal between Rice Lake and Lake Simcoe."

Mr. Baird did not recommend the cutting of a Canal throughout the whole distance, but he advised the formation of a Canal of 13¾ miles in length for the Talbot River section, and for the remainder of the line he advocated the damming of the rivers, so as to establish a succession of still water reaches connected by means of locks (a plan at the time successfully carried out on the Rideau).

Leaving Rice Lake, he proposed to ascend the Otonabee, Clear Lake, Buckhorn Lake, Chemong Lake, Pigeon Lake, Sturgeon Lake, Cameron Lake and Balsam Lake—which is the summit; thence to descend into Lake Simcoe by means of a Canal and about 2¾ miles of the River Talbot.

He found that the distance from Rice Lake to Lake Simcoe was 109½ miles; and his Report divided the works into five sections, as follows:—

NAMES OF SECTIONS.	Distance in Miles.	Rise in feet.	No. of Dams required.	No. of Locks required.
1. From Rice Lake to Peterborough....................	$21\frac{22}{80}$	4½	2	1
2. From Peterborough to Clear Lake.................	$14\frac{34}{80}$	147½	6	14
3. From Clear Lake to Bobcaygean....................	$31\frac{40}{80}$	38⅓	2	5
4. From Bobcaygean to Balsam Lake................	$26\frac{24}{80}$	34	3	5
5. From Balsam Lake to Lake Simcoe...............	$16\frac{40}{80}$	118½ (fall.)	...	12
Total....................................	110		13	37

For further details respecting the *Profile of the Inland Water Communication* proposed by N. H. Baird, from Rice Lake to Lake Simcoe,—and thence to Lake Huron—see Appendix No. 15, at page 129.

The total length of Canal required on these five sub-divisions was about 17 miles.

Mr. Baird proposed stone locks, 134×33, with 5 feet of water on the sills, and estimated the cost of the whole at £262,067 16s. 4d. Halifax currency, ($1,048,271.27).

It will thus be seen that Mr. Baird's estimate for a line of navigation from the mouth of the Trent to Lake Simcoe, with stone locks 134 feet long by 33 feet broad, and 5 feet of water on the sills, was as follows:—

		$ cts.
For the division extending from the mouth of the Trent to Rice Lake.........	£233,447 6s. 11½d.,	(933,789 39½).
For the division extending from Rice Lake to Lake Simcoe..	£262,067 16s. 4d.,	(1,048,271 27).
Total..	£495,515 3s. 3½d.	($1,982,060 66½).

It was resolved that the works should be commenced forthwith; and to facilitate the working of the details they were put into two divisions:

1st. The River Trent.

2nd. The inland or back waters of the Newcastle District.

The first division comprised all the works from the mouth of the Trent to Heely's Falls.

The second extended from Heely's Falls, on the River Trent, to Lake Scugog.

In 1836 an Act of Parliament was passed, authorizing a loan of £16,000 ($64,000), to be applied to the construction of works on the inland or back waters; and in 1837 a loan of £77,507 11s. 4½d. ($310,030.27) was authorized, to be appropriated to the River Trent works. In 1839, a further loan of £3,000 ($12,000) was authorized, to be applied to the inland division; thus forming, with the £16,000 ($64,000) previously authorized, a sum of £19,000 ($76,000) for the inland or back water section.

Two Boards of Commissioners were appointed by the Governor, one for each division, as provided by the Acts; and, under the auspices of these Commissioners, the works were commenced in 1837, with Mr. Baird as Engineer.

The works of the Trent division were commenced near the mouth of the Trent, at Myers' Island, and at Chisholm's Rapids. At Myers' Island they consisted of one dam and one lock; and at Chisholm's Rapids of one dam and one short canal with a single lock.

The engineer in charge of the works informed the Commissioners that the lock at Chisholm's, could not be used without a dam at the head of the Nine-mile Rapids, to retain the waters in the reach between Nine-mile Rapids and Chisholm's. The matter was considered, and it was decided to postpone the construction of this dam until after the completion of the lock at Chisholm's.

The dams at Myers' Island and at Chisholm's were to be of wood, and the locks of cut stone, 134×33 feet, and with 5 feet of water on the sills.

On the commencement of the works, in 1837, the Receiver General laid aside the sum of £28,000 stg. ($136,266.66), which had been provided by the sale of Debentures, to be applied to the works on the River Trent division.

The value of the works under contract, with the proposed dam at the head of the Nine-mile Rapids, together with contingencies, engineering expenses, &c., did not amount to more than £25,000 ($100,000).

The funds provided were therefore sufficient; but it appears that, in 1838 and 1839, during a stringency in the money market, the sums which were to have been paid to the Commissioners were applied to other purposes; and moreover, that up to the end of the year 1841, when the Commissioners gave up their charge, the total amount that had been placed in their hands for the works was only £20,935 0s. 3d., Halifax c'y. ($83,740.05), as is shown by a Return to an Address of the House, dated 18th December, 1844.

The want of funds was a source of embarrassment to the Commissioners; and early in 1839 the contractors suspended operations.

At the date of the Union of the Provinces of Upper and Lower Canada, the works at Myers' Island, which had then been abandoned for some time, consisted of two coffer dams, excavation of lock-pit, stone prepared for lock, timber for lock gates, and a permanent dam between the island and the main shore. The dam at the head of the Nine-mile Rapids (Widow Harris,) had not been commenced.

At Chisholm's Rapids, the dam was finished at the time of the union of the Provinces; while the slide, which was to be 100 feet in length, was only about half finished. The lock, however, was far advanced towards completion, and about two-thirds of the rock excavation were made.

On the inland or back water division the works had been commenced by the Commissioners early in the spring of 1837. The works undertaken were as follows:—

At Heely's Falls	1 dam.
" Crooks' Rapids	1 do. and 1 lock.
" Whitlas	1 do. and 1 do.
" Buckhorn	Enlargement of dam.
" Bobcaygean	1 new dam, and repairs to old lock.
" Purdy's Mills (now Lindsay)	1 dam and 1 lock.

The dams were to be of wood, filled with stone; the locks at Crooks' and Whitlas' to be of stone, and the dam at Purdy's mills of wood. All the new locks were to be 134 × 33feet, with 5 feet of water on the sills, as on the lower divisions.

Tenders were received for the execution of the works, within the appropriations that had been made; but their progress, up to the period of the Union of the Provinces (1841) was slow, and often interrupted altogether, owing, it appears, to the limited advances made by the Receiver General to the Commissioners.

At the date of the Union the condition of the works on this division was as follows:—

At Heely's Falls: timber had been provided, but no part of the dam was commenced.

At Crooks' Rapids: the lock was nearly completed; the channels leading to the lock, above and below, had to be excavated, but the dam had been completed as early as 1838.

At Whitlas' Rapids: the site of the lock had been partly excavated by a contractor who abandoned the work in 1838, and partly by men hired by the day by the Commissioners. Stone for the lock and timber for the dam had been delivered on the ground, part of the stone being cut; but no works of construction had been commenced.

At Buckhorn: the old dam, which had been constructed by a private individual for milling purposes, had been raised sufficiently to give five feet of water on the sills of the locks at Bobcaygean, before the autumn of 1840. At Bobcaygean, the old lock had been thoroughly repaired, and the dam reconstructed prior to the autumn of 1839.

At Purdy's Mills (now the Town of Lindsay): the site of the lock had been partly excavated, coffer dams made round the lock excavation, lumber for the dam and lock prepared and delivered on the ground, and the lock partly framed. This had all been done in the years 1837 and 1838. In 1839 the works were abandoned by the contractors.

The total expenditure previous to the Union, in February, 1841, on the two divisions, namely—the River Trent and the Inland and Backwater, was £44,398—($177,592), according to a Return made to the Legislative Assembly, on the 27th July, 1847.

At the period of the Union of the Provinces these works were placed under the control of the Board of Works; and, in a Memorandum to His Excellency the Governor General, dated August 12th, 1841, the Chairman of the Board, reported that the intention of the original designers of this line of navigation was to establish a through line of communication, which would accommodate the through trade between the Western States and the

Sea-board, and also the local traffic of the Counties it traversed. As a through line, he maintained that it could not be successful, owing to the great lockage required, and the limited draft of water of the vessels which could be used on this route.

As an accommodation to the local traffic, he stated that the route, through its greater part, was extremely circuitous; assigning as an example that a farmer or merchant settled at the head of Rice Lake could, by passing over 12 or 14 miles of road, reach the harbors of Port Hope and Cobourg, on Lake Ontario; whereas by following the Trent he would have to pass over a distance of 80 miles before he reached that lake.

He also stated that the probable cost of the works, when completed, would be from £800,000 ($3,200,000) to £900,000 ($3,600,000), and advised that the scheme of forming the through line should be abandoned, and, in lieu thereof, that the locks which had been commenced should be finished, and that slides to facilitate the descent of timber should be made.

An appropriation of £50,000 ($200,000) was asked from the House, to be applied to these works.

His Excellency having approved of these suggestions, the following works were authorized, and have since been executed:—

NINE-MILE RAPIDS.

At the head of these Rapids a stone dam was erected in 1844.

CHISHOLM'S RAPIDS.

The unfinished lock and slide were completed and ready for use in 1844.

PERCY LANDING.

Piers and booms were constructed and placed at this station in 1844; but it having been found that the expense of maintaining this station was too great in proportion to the benefits it conferred, the works were allowed to decay. The piers were carried away by floods and have not since been replaced; a part of the boom was removed and fitted elsewhere, and another part has been lost.

RANNEY'S FALLS.

At this station a dam was built in 1844; and a slide, one thousand four hundred and ninety-two feet in length, was completed in 1845. Necessary guide booms were also provided.

CAMPBELLFORD.

Guide booms were placed here in 1844. A bridge was built in the same year, and has been placed under the control of the Township Council of Seymour.

FIDDLER'S ISLAND.

A cross dam of some 12 feet in height, and a wing dam, were built here in 1848.

MIDDLE FALLS.

Four dams and two slides were built here in 1844.

CROW BAY.

At the foot of this Bay a retaining boom of some 2,600 feet in length is maintained

HEELY'S FALLS.

A dam and two slides were placed here in 1844.

CROOKS' RAPIDS.

As already stated, the Commissioners of the Inland waters had completed the dam at this station in 1838, and had advanced far towards completing the lock and canal.

The Board of Works completed the lock and canal in 1844.

In 1845 a slide for timber was constructed, and a bridge of 485 feet in length was made over the river, below the dam, with a swing bridge over the lock. This bridge is now under the control of the Counties of Northumberland and Peterborough.

WHITLAS' RAPIDS.

The lock, dam, and canal commenced by the Inland Water Commissioners, were finished in 1843.

LITTLE LAKE.

Three piers and one boom were placed here in 1852.

PETERBOROUGH BRIDGE.

This bridge is introduced here merely to show, at one glance, all the works in connection with these waters. It was built in 1847.

BUCKHORN RAPIDS.

It has been already stated that the Inland Waters Commission had built a dam at this station previous to the Union. A bridge on bents was built in 1845, and rebuilt in 1857. A slide with two feet draught of water, with booms, were made for this station in 1857, and additional booms in 1865.

BOBCAYGEAN.

It has been stated that the Inland Waters Commission had before the Union, built a dam and a wooden lock at this station. In 1857 the wooden lock was replaced by one of stone, and in 1858 two slides were built, and a basin and two mill-races excavated.

Three sections of bridges were built over branches of the river opposite the lock, in 1845, and have since (as before stated) been placed in charge of the local Township Municipalities. A swing bridge, connecting with this line of bridges, was placed over the lock in 1858.

LINDSAY—(FORMERLY PURDY'S MILLS).

The wooden lock, as commenced by the Inland Commission, was completed in 1844,—the lock was converted into a slide in 1859, and a bridge, consisting of three spans, on cut stone abutments and piers, was opened in 1864.

In obedience to a request made by the Legislature, the Chief Engineer of this Department, acting under the orders of the Commissioner of Public Works, caused an examination of the River Trent to be made, between the Bay of Quinté and Rice Lake.

In his Report (22nd April, 1846), he reviewed the plan proposed by Mr. Baird in 1833, of building dams across the river at various points in its most rapid sections—so as to form it into a series of still water reaches, which were to be connected by means of locks.

He objected to this scheme that dams would always interfere, more or less, with the passage of timber; that they were not durable, and were too liable to be damaged by floods; he suggested in lieu thereof the forming of three sections of canal,—the first extending from near the mouth of the Trent to the head of the Nine-mile Rapids; the second, from Percy's Landing to the foot of Crow Bay; and the third, from Crow Bay to the head of Heely's Falls.

These three Canals, in connection with the locks at Chisholm's and Crooks' Rapids, which were then completed, would have opened a line of navigation from the Bay of Quinté to Peterboro, and the Otonabee.

He stated that the entire length of Canal required in the three sections proposed, was about 18½ miles, and that 29 locks were necessary.

He also stated, that before a final opinion could be given, further surveys were necessary, and that the probable cost of the works (if executed on the scale adopted for the locks at Chisholm's and Crook's Rapids) would be about £400,000, Halifax currency, ($1,600,000).

In 1855, the Commissioner of Public Works reported that the cost of maintaining the slides, booms, and other works connected with the descent of timber on the Trent, was much greater than the revenue they produced; he recommended that the said works should be placed in charge of a Committee or Company of persons interested in the lumber trade on the Trent, who had offered to assume their management. In accordance with this recommandation the works connected with navigation, such as locks, lock-houses, &c., remained under the direct control of the Department of Public Works; while the works connected with the descent of timber at Chisholm's Rapids, Ranney's Falls, Middle Falls, Heely's Falls and Crooks' Rapids, were handed over to the care of the Company.

The Company undertook to keep the slides, &c., in working order, but were not held to renew them when worn out. They were authorized to levy tolls on timber descending the river. At Chisholm's and at Crooks' Rapids the facilities for bringing down timber were not increased by the Government works, tolls were therefore not levied at either of these stations. But at Ranney's Falls, Middle Falls and Heely's Falls, the works had been constructed expressly for the safe descent of timber, and therefore tolls were collected at each of these stations.

Previous to December, 1866, the rate of toll was one dollar per crib for each of the 3 slides; but on the 8th December, 1866, an Order in Council was passed, fixing the rate of tolls payable at each of the three stations just named at one cent for each log of 13 feet in length, and a proportionate sum on pieces of greater length; and for each crib of square timber one dollar.

The expenditure by the Department on these improvements since the Union in 1841, up to the 30th of June, 1867, as shown in Appendix No. 1, at page 3, is $492,486.31. Appendix No. 16, at page 130, shows the expenditure on the slides by the "Trent Slides Company" from the spring of 1855, to 1st January, 1867.

In the public accounts, the amount charged against the "Improvements of the Trent" is $558,506.20.

For expenditure on these works before and since the Union, from Government and other funds—see Appendix No. 70, at pages 486, 507 to 509, and 514 to 516.

The total cost of construction on these works since their commencement, up to the 30th June, 1867, as shown by Appendix No. 70, amounts to $670,078.31, subdivided as follows, viz.:

On Canals, &c., prior to the Union	$92,449.33	
Slides, &c., " "	85,142.67	$177,592.00
On Canals, &c., since the Union	216,921.98	
Slides, &c., " "	228,347.05	
Roads, " "	30,454.40	
Bridges, " "	16,762.88	492,486.31
Total		$670,078.31

For statement of water power leased on these works,—see Appendix No. 25, at pages 310–311.

For a detailed description of the present condition of the works,—see Appendix No. 14, pages 116 to 121. Also Appendix No. 15, pages 122 to 129. Also Appendix No. 17, pages 152 to 157.

For a description of the works executed by the Department on this line during the year ending the 30th of June, 1867,—see Appendix No. 41, at pages 361 and 362.

For statement shewing the gross revenue, the expenditure for repairs, management, collection of Tolls, &c., and the net Revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867—see Appendix No. 68, pages 476 to 478.

For proclamations respecting tolls and regulations on the Newcastle District Locks,—see Appendix No. 55, at page 433.

For proclamations respecting tolls and regulations on the Newcastle District Slides—see Appendix No. 55, at page 433.

MONTREAL AND LAKE HURON NAVIGATION, *viâ* OTTAWA AND FRENCH RIVER.

CHATS CANAL.

The Chaudière Falls, opposite the City of Ottawa, form the barrier which limits the extent of the navigation of vessels leaving Montreal and ascending the Ottawa River.

The desirability of extending this navigation further up the Ottawa, by means of Canals, engaged the serious attention of public men in 1852 and 1853.

Surveys were undertaken in 1853, to ascertain what works were necessary to extend the navigation from the foot of the Chaudière Falls, to the head of the Chats Lake. (See Diagram No. VII.)

The River was surveyed by Engineers specially appointed for that purpose; and the Chief Engineer of this Department, reported, in March, 1854, that to ensure 7 feet depth of water for the navigation between Ottawa City and Chats Lake, it would be necessary to construct six miles of canal. His report contemplated locks of the same length and breadth as the present lock at Ste. Anne (190 × 45 feet).

The following Table shows the length of the navigable reaches and proposed Canals between Ottawa City and the head of Chats Lake :—

SECTIONS.	Length of Canal in Miles.	Total rise of Lockage in feet.	Navigable waters in miles.
Chaudière Canal, from the navigable waters below the Chaudière Falls to the foot of Lake Chaudière	6	63	....
From the foot of Lake Chaudière to Rapides des Chats (navigable)	....	....	25
From foot of Rapides des Chats to Chats Lake..................	$2\frac{5}{8}$	$49\frac{8}{10}$	....
Chats Lake (navigable)	....	....	25

It was deemed expedient to commence, in the first instance, only the "Chats," the shorter of these two canals. Two lines had been proposed for this canal, one on the north and one on the south shore. The northern line was selected, tenders were received for its construction, and on the 19th June, 1854, a contract was entered into with Messrs. A. P. McDonald and P. Schram to execute all the works connected therewith, on a schedule of prices ; the quantities to be determined by measurement.

The works were commenced in August, 1854, and continued with some degree of activity until the 15th November, 1856, when they were suspended, the contractors who had undertaken their execution at exceedingly low rates, having declared themselves unable to carry them on further. The rock to be excavated proved to be of the Laurentian series, and was much harder than was expected.

The Government, admitting that the contractors had deceived themselves in reference to the nature of the material to be excavated, consented to their petition that the contract be cancelled, and that they be paid for the work executed. The works were accordingly abandoned by the contractors on these conditions.

At this juncture the scale of navigation which should be adopted for the Ottawa was discussed, and surveys of the whole river having been ordered, it was decided to postpone the completion of the works already commenced and they have not since been resumed.

The works that had been executed consisted chiefly of the partial excavation of the pits for the five lower locks near the Chaudière Lake, and the guard lock at the Chats Lake.

Some excavation was also made in the trunk of the Canal, between the lower locks and the guard lock, most of it having been made through solid rock.

Stone was quarried and partly dressed, for the construction of the locks, and a wharf was built at the foot of the Canal.

The amount paid to the contractors for the work done was $482,950.81.

OTTAWA RIVER AND FRENCH RIVER SURVEYS.

It has often been suggested that a most important line of navigation could be opened between our Sea Ports and the Western Lakes, through the Ottawa River.

A glance at the map of Canada will show that a vessel going from Montreal to the far west, by the St. Lawrence and the Lakes, makes a straight south-west course to the head of Lake Erie, 607 miles; then, turning suddenly an acute angle, proceeds almost due north through the Lakes Ste. Claire and Huron, 346 miles, to the point of junction of the three great lakes, Michigan, Huron and Superior. But if, instead of following the foregoing route, vessels could ascend the Ottawa and French rivers, the line of navigation between Montreal and the point of junction of these three great lakes would be much more direct, and shorter by nearly one-half the distance. (See Diagrams Nos. I and VII.)

The Ottawa and French rivers formed the old French route between the sea-ports and the far west, and its course may be thus traced:—Leaving Montreal, we enter the Ottawa at Ste. Anne, and ascend that river as far as the mouth of the Matawan, a tributary of the Ottawa, 305 miles above Montreal. Entering this tributary we ascend 44½ miles, to the upper end of Trout Lake which lies at the summit; then, crossing a low sandy ridge of ⅝ of a mile, we descend to the north east shore of Lake Nippissing, and 30 miles further at about the middle of its length, and upon its south side we find the head waters of one of the tributaries of the French River. Following the course of this tributary and the French River to its mouth, a distance of 50 miles, we enter the Georgian Bay, at the north-eastern end of Lake Huron.

This line of navigation was examined by two Engineers, under the direction of this Department, first in 1857, and afterwards in 1859.

One of these gentlemen reported on the 22nd March, 1858, that the total length of the Ottawa route between Montreal and Lake Huron was 430 miles, that the distance between Montreal and Chicago by this route would be only 575 miles; while by the St. Lawrence and lakes it is 1,145 miles, and that all the obstructions to navigation between the two extremities would be overcome by the construction of a number of short canals, the aggregate length of which (including the Lachine Canal) would be 58 miles, leaving 372 miles of River and Lake navigation.

He suggested that the dimensions of the locks should be 250 feet long by 50 feet broad, with 10 feet of water on the sills; and stated that, in passing from Lake Huron to Montreal, a vessel would ascend 83 feet to a summit level, and then descend 642 feet to the

St. Lawrence, at Montreal, thus giving for each passage a total rise and fall of 725 feet. Of these 725 feet, 698 would have to be overcome by means of locks.

He further stated that, by damming the mouth of Lake Nipissing at the head of French River, so as to raise the surface of its waters about 23 feet above its present level, it would form a summit reservoir of 300 square miles in area, which would be more than sufficient to ensure a constant supply of water on the summit reach. He estimated the cost of all the works necessary to complete this line of navigation at $24,000,000.

The other engineer reported on the 2nd of January, 1860, stating that the projected Canals on the upper section of the Ottawa and the French River would be through Laurentian and Silurian rocks, the removal of which is very expensive.

That the length of Canal to be excavated might be reduced by placing dams across the rivers, thus converting the rapids into a series of still sheets of water, with locks from one to the other. That by this means the total length of the short sections of Canals would be 29$\frac{3}{10}$ miles, instead of 58 miles, which is the length of those proposed by the engineer who reported in 1858, and that 69 locks with 709½ feet of lockage would be required. That the locks should be 250 feet long by 45 feet broad with 12 feet of water on the sills, and that the cost of the works would be $12,057,680. In this estimate, however, he did not include the cost of enlarging the Lachine Canal, the land damages, the law expenses, and the interest on capital during construction.

Nothing further has since been done in reference to this subject.

WORKS ON NAVIGABLE RIVERS.

RIVER THAMES.

The River Thames discharges into Lake Ste. Claire. Its bed having been for some years very much obstructed by the remains of old bridges, sunken logs and driftwood, these obstructions were removed in 1857, at a cost of $3,821.42.

THE NARROWS, BETWEEN LAKE SIMCOE AND LAKE COUCHICHING.

The waters of Lake Couchiching flow into Lake Simcoe through a narrow passage, generally known as the Lake Simcoe Narrows. In 1844 the Department constructed a Bridge over these Narrows, with a "Draw," so as to admit the passage of vessels.

As the trade of this District increased, it was represented that if the channel in these Narrows was enlarged, and if the "Draw" through the Bridge was made broader, larger boats could be used, with great advantage to the public.

These considerations led the Government to undertake the improvement of the channel, and also the increasing of the span of the draw-bridge.

This was accomplished in 1857 and 1858.

The channel was dredged to a depth of six feet. The total cost of the works executed in 1857 and 1858 was $10,138.30.

PIERS AT THE RICHELIEU RAPIDS.

RIVER ST. LAWRENCE.

At a point about 36 miles above Quebec, the depth and the breadth of the St. Lawrence, becomes diminished for a short distance, and in consequence the current during the ebb tide becomes sufficiently strong to form a rapid, known as the "Richelieu Rapids."

In the autumn, and in the early part of winter, large masses of floating ice are carried down these rapids; and, on reaching the shoals, they ground and accumulate to such an extent as to dam up the water and throw it back on the low lands, flooding both shores of the river for many miles above the rapids. The damage caused by these floods on various occasions was so great that the attention of the Government has been directed to it.

It has been asserted that during very severe winters, when an ice-bridge has been formed above the rapids, the liability to damage from this back water is much diminished, and, in 1856, the Department was directed to try the experiment of placing a few large and heavy piers of crib-work, filled with stone, above the Rapids to ascertain whether by obstructing the passage of the ice early in the autumn, before it had formed into very large masses, a sufficient quantity could not be gathered to form an ice-bridge above the Rapids, so that after becoming consolidated by the frost, it might, in its turn, become an impassable barrier to the descending fields of ice.

A few piers were built there by way of experiment, between the years 1856 and 1858, but these only tended to prove that any permanent obstruction to the descending ice could only be accomplished by a large expenditure of money, leaving the question of the amount of damage that might be produced by the back water still unsettled.

The cost of these experimental works amounted to $13,713.

HARBORS AND PIERS.

It has already been reported to Your Excellency that several of the Harbors and Piers which have been improved by the Government have either been sold to private companies or have been transferred to the municipal authorities of the counties in which they are situated.

The expenditure before and since the Union, from Government and other funds, on the harbors and piers of Canada, will be found in Appendix No. 70, at pages 489 to 497.

The following is a short description of these works, taken in the order in which they occur on ascending the rivers where they are situated. (See Diagrams Nos. I., II., III., VI., and IX.)

AMHERST HARBOR.

Amherst Island is one of the most important of the Magdalen Group, in the Gulf of St. Lawrence, and its harbor is situated about 140 miles south-east of Percé.

By an Order in Council, dated 26th July, 1860, the Department was authorized to pay the harbor-masters of Amherst Harbor and Gaspé Basin respectively a yearly salary of $50, and also to pay the incidental expenses connected with these harbors—such as the removal of the buoys in winter, and laying them down again in the spring—the whole of the expenditure, including the allowance for salaries, not to exceed $400 per annum.

This harbor has been under the control of the Quebec Trinity House since the 1st of January, 1865.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

GASPÉ BAY AND HARBOR,

Are situated near the eastern extremity of the peninsula of Gaspé.

The Department maintained the buoys in the bay and harbor of Gaspé from 1858 to 1865. On the 8th of August. 1864, an Order in Council placed the buoys in the bay and harbor under the control of the Trinity House, Quebec.

The total expenditure on account of these buoys up to the the 30th of June, 1865, amounts to $787.11.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PIER AT RIMOUSKI.

This pier lies on the south shore of the St. Lawrence, 180 miles below Quebec, and about one mile below the Village of Rimouski.

It is constructed of wood and stone. It extends 2,150 feet into the river, and its breadth for 1,650 feet from the shore, is 22 feet; and for the remaining distance of 500 feet, its breadth is 34 feet.

At its outer extremity the height of the pier above the bottom of the river, is 34 feet; and the depth of water at the lowest stages of the tide, is 8½ feet. It was completed in 1855, at a cost of $106,944.80.

The depth of water herein given, at the end of the landing piers below Quebec, is that which is found at low water during spring tides, and is about 4 feet less than during Neap tides. It varies from year to year on account of the formation and shifting of sand shoals.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

For proclamations respecting tolls and regulations on Rimouski River—see Appendix No. 55, at page 435.

PIER AT RIVIÈRE DU LOUP.

This Pier is situated on the south shore of the St. Lawrence, at the extremity of a point of land about one mile from the Village of Rivière du Loup, 108 miles below Quebec.

It is of wood and stone; its length is 1,667 feet, and its breadth is 34, excepting the last 50 feet of it, which is 126 feet broad.

At the outer extremity the pier is 42 feet above the bottom of the river, and the depth of water at extreme low water is 16 feet. It was completed in 1855, at a cost of $170,129.35.

For description of the works executed during the past fiscal year—see Appendix No. 43, at page 367.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PIER AT RIVIÈRE OUELLE.

This pier lies on the south shore of the St. Lawrence, 75 miles below Quebec, at Pointe aux Orignaux, and 4½ miles from the Village of "Rivière Ouelle," situated on the river of that name.

It is built of wood and stone, and extends 1,200 feet into the river. Its breadth is 34 feet, with the exception of the last 50 feet, which is 111 feet wide.

At its outer extremity the top of the pier is 42 feet above the bottom of the river, and the depth of water at low water, of spring tides, is 15 feet.

It was completed in 1856, at a cost of $225,229.87.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PIER AT MALBAIE.

This pier is on the north shore of the St. Lawrence, 81 miles below Quebec,—about

2½ miles above the Village of Malbaie. It is built of wood and stone, and its length is 475 feet.

It is 34 feet broad with the exception of the outer 45 feet, the breadth of which is 115 feet; at its outer extremity it is 44 feet above the bottom of the river, and the depth of water, at low water of spring tides, is 18 feet. It was completed in 1854, at a cost of $53,487.20.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No· 55, at page 434.

PIER AT EBOULEMENTS.

This work lies on the north shore of the St. Lawrence, 63 miles below Quebec, some three miles above the Church of the Eboulements village. It is constructed of wood and stone. It projects 920 feet into the river, and its breadth is 34 feet throughout. At its outer extremity it is 32 feet high, and the depth of water at low tide is 9½ feet. It was completed in 1853, at a cost of $65,531.52.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PIER AT L'ISLET.

This pier is situated on the south shore of the St. Lawrence, 46¾ miles below Quebec, at the Village of L'Islet. It is of wood and stone. Its length is 1,200 feet, and its breadth 34 feet, excepting for a distance of 50 feet from the outer end, where the breadth is increased to 100 feet.

At its outer extremity the height of the pier is 34 feet, and the depth of water is 8½ feet at the lowest stages of the tide. It was completed in 1855, at a cost of $113,343.27.

For proclamations respecting tolls and regulations on harbors in general—see appendix No. 55, at page 434.

GROSSE ILE.

QUARANTINE STATION.

Grosse-Ile is an island in the St. Lawrence. It lies 33 miles below Quebec, and nearly midway between the north and south shores of the river which at this point is 9 miles broad.

The harbor works at this place consist of two landing places—one for the healthy and another for the sick. The former is situated at the south-western extremity of the island. It extends 345 feet into the river, and is 48 feet wide in its whole length. The latter lies to the eastward, and its dimensions are 120 feet long by 28 feet broad.

The first was completed in 1848, and the second in 1866. The cost of the two amounted to about $17,280.28.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PIER AT BERTHIER.

This pier is situated on the south shore of the St. Lawrence, 24¼ miles below Quebec, at the Village of Berthier; it is also of stone and wood. It projects into the river 587 feet; its breadth is 34 feet, but the last 57 feet in the water are increased to 60 feet; its height at the river end is 34 feet, and the depth of water, during low water of spring tides, is 15 feet. It was completed in 1853, at a cost of $37,723.14.

For a description of the works executed during the year ending 30th June, 1867—see Appendix No. 43, at page 367.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

QUEBEC HARBOR

Is under the management of Special Commissioners

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

MONTREAL HARBOR

Is also under the charge of Special Commissioners.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

MOORING PIERS AT THE ST. LAWRENCE RAPIDS.

There are three piers of this description; the first is at the head of the Lachine Rapids, the second at the head of the Cascades Rapids, and the third about 3 miles above the Village of the Cedars at the upper end of the navigable reach, immediately above "La Chute à Bouleaux."

These piers consist of crib work filled with stone, 70 feet long by 20 feet wide.

They were placed at the heads of these rapids for the convenience of steamers and vessels that might be overtaken by night or fogs. They were completed in 1856, at a cost of $8,859.

PIER AT ST. ANICET.

This work lies on the south shore of Lake St. Francis, near its upper end, at the Village of St. Anicet. It is of wood and stone, and its length is 300 feet, 100 feet of which is 34 feet, and the remainder 18 feet wide. It was completed in 1862, and its cost was $1,920.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PICTON HARBOR

Is situated on the south side of the Bay of Quinté, Lake Ontario; and is 36 miles from Kingston. The principal works executed by the Department at this place, consist of a channel dredged to a width of 140, and a depth of 9 feet at low water, and extending from the wharves at the head of the bay to deep water outside.

This work was commenced in 1857 and completed in 1862, and its cost was $8,424.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

NAPANEE.

This harbor is situated in the County of Lennox, Township of Richmond, on the north side of the Bay of Quinté, Lake Ontario, and lies about 5 miles up the River Napanee.

The harbor works executed at this place by the Department, consist of the excavation of a channel half a mile in length to a depth of 9 feet, through a shoal over which there was originally only 6 feet of water. The works were commenced and finished in 1861, at a cost of $1,078.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PRESQU'ILE HARBOR.

This harbor is situated on the north shore of Lake Ontario, immediately above the Peninsula of Prince Edward, and about 78 miles above Kingston. The only works executed by the Department, at this place, have been the placing of buoys to mark the entrance to the harbor. The buoys were first placed in position in 1857. Cost of work, $626.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

COBOURG HARBOR.

This harbor is situated on the north side of Lake Ontario, some 96 miles above Kingston. The works executed consist of two piers projecting from the shore. The united length of the two piers is 2,017 feet. They inclose an area of 12¼ acres of water, and are placed 190 feet apart at the entrance to the harbor. The depth of water at the outer end of the east pier is 14 feet, decreasing to 7 and 8 feet in the centre of the basin, and to 3 feet in those portions near the shore. The works were commenced by a Company organized under an Act of Parliament passed in 1829. In 1842, they were assumed by the Government, and in 1850, they were sold to the Town Council of Cobourg for the sum of $16,000.

The total expenditure by the Government on this harbor up to the Union of the Provinces of Upper and Lower Canada, in 1841, was £5,002 13s. 7d. ($20,010.72) in debentures. Since the Union a sum of £10,499.19.11 ($41,999.98) was advanced, and is a perpetual Loan on which Interest at 6 per cent. is payable.

For statement respecting sale of harbor—see Appendix No. 26, at pages 314, 315.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 431.

PORT HOPE.

Port Hope lies on the north shore of Lake Ontario, 6 miles above Cobourg, or 102 miles above Kingston. The works are situated at the mouth of Smith's Creek, and consist of parallel lines of wooden wharves, extending into the lake. The length of the east pier is 600 feet, and of the west is 480 feet.

The piers were carried to a depth of 13 feet water. The harbor can only admit vessels drawing 9 feet. The width at the entrance is about 104 feet. The area of the harbor is 2¾ acres.

The works at this harbor were commenced by the Port Hope Harbor and Wharf Company, organized under the authority of an Act of Parliament, 10th Geo. IV, c. 12, dated the 20th of March, 1829; and in 1832, this Company obtained a loan of $8,000 dollars from the Government.

On the 3rd of January, 1852, the stockholders sold the harbor to the Town Council of Port Hope, for the sum of £11,500, or $46,000; and by the Act 16 Vic., cap. 140, (May 23rd, 1853,) this sale was confirmed, and the harbor was vested by Government in Commissioners acting as trustees for the benefit of the Town Council.

In 1864 (June 30th) the 28th Vic., Cap. 86, authorized the Port Hope, Lindsay and Beaverton Railroad Company to acquire and to hold this harbor.

The amount expended by the government on this harbor, prior to the Union in 1841, was $11,883.13, in debentures of which $8,000 bore interest at 5⅝ per cent., and since the Union, $46,797.13, granted to the Commissioners of the harbor.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 431.

WHITBY, FORMERLY WINDSOR HARBOR.

Whitby Harbor, on the north shore of Lake Ontario, is about 135 miles above Kingston.

The Harbor is formed by a breakwater, constructed upon a line running nearly east and west, and separating Big Bay from the lake.

The length of the breakwater is 3,042 feet, both ends of it touching the shore.

At about 800 feet from the eastern end it has an opening of some 250 feet broad to admit vessels.

The entrance is guarded by two parallel lines of crib work, 250 feet apart, built at right angles to the direction of the breakwater, and extending into the lake. One of these piers extends 620 feet into the lake, and the other 394 feet.

The area enclosed between the breakwater and the shore is about 108 acres.

In the eastern portion of the harbor, within the breakwater, there is 1,250 feet of pier work, 20 feet broad, made for wharfage purposes. Although this harbor appears to have been surveyed in accordance with an order of the Legislature of Upper Canada in 1835, and an appropriation voted for it, in the session of 1836-37, of £9,000 ($36,000); yet it does not appear that any attempt to commence the works had been made before the Union of the Provinces in 1841.

The breakwater and piers were commenced in 1843 and completed in 1846: and the harbor was dredged between 1847 and 1850.

The general depth of the water within the harbor is from 3 to 5 feet, and the dredged portions are from 10 to 12 feet in depth. The expenditure up to the date of the sale of the harbor in October, 1850, was $178,703.37.

This harbor was vested in the Board of Works by the Act 9th Vic., cap. 37, of 1846, and under the authority of an Order in Council, dated August 13, 1850, it was sold, together with the road leading therefrom to Lake Scugog, on the 15th of October, 1850, to the Port Whitby and Lake Scugog, Simcoe and Huron Road Company for the sum of $80,400.

The Company having made default in its payment, the road and harbor were resumed by the Government on the 19th May, 1863; and on the 21st March, 1864, the harbor was sold to the present "Port Whitby Harbor Company" for the sum of $35,150; and the road was sold to another Company for $10,000.

For statement of property leased formerly at Whitby harbor—see Appendix No. 25, at pages 296, 297.

For statement respecting sale of harbor—see Appendix No. 26, at pages 312, 313.

For proclamations respecting tolls and regulations on this harbor—see Appendix No. 55, at page 434.

TORONTO HARBOR.

The general improvements of the harbor of Toronto have been intrusted to a Board of Commissioners, appointed under the provisions of the Act 13 & 14 Vic., Cap. 80 (August 10, 1850); and from that period this Department has had no connection with these works.

Previous to 1850 the Department had charge of a pier lying at the upper end of the harbor, and known as the Queen's Wharf.

The pier projects at right angles from the shore; its length is 1,091 feet, and at the outer end there is a depth of water of from 9 to 12 feet.

It was constructed by Commissioners appointed by the Government of Upper Canada in 1833 and 1837.

In 1850 the pier was placed under the control of the Toronto Harbor Commissioners; and in 1862, these same Commissioners were authorized by the 25th Vic., Cap. 26 (June 9th, 1862), to lease this pier, for a period not exceeding 21 years, to railway companies, or to any other persons for the purpose of constructing grain elevators thereon, and laying down branch lines of railway leading thereto.

The expenditure in debentures on this work prior to the Union, was $20,800; and since the Union, up to 1851, $2,165,12.

For proclamations respecting tolls and regulations on this harbor—see Appendix No. 55, at page 433.

OAKVILLE.

Oakville lies on the north shore of Lake Ontario, 19 miles above Toronto, and 177 miles above Kingston.

The works are at the mouth of Sixteen Mile Creek, and consist of two piers projecting into the lake. The united length of the piers is 1,562 feet, and the breadth of the opening between the piers to admit vessels is 125 feet.

In 1828, Mr. William Chisholm, the proprietor of the land on both sides of the creek near its mouth, was authorized by Act of Parliament of Geo. IV., cap. 19 (March, 1828), to form this harbor, with power to levy tolls on vessels visiting it. The works were to be constructed within five years.

In 1831, another Act, 1st William IV., cap. 24, March, 1831, authorized the Receiver General to raise a loan of £2,500 by Debentures in favor of William Chisholm, as an aid towards the completion of this harbor, to be refunded in ten years, and in 1840 a third act (3rd Vic, cap. 50, Feb., 1840) extended the term for the repayment of the above loan for ten years more.

At the date of the Union of the Provinces, in 1841, the amount expended in debentures on this work was $14,361.08, of which $10,000 bore interest at 6 per cent.

No works have been executed here since the Union.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PORT DALHOUSIE.

Port Dalhousie is on the south shore of Lake Ontario, and forms the lower entrance to the Welland Canal. The works consist of two parallel piers 200 feet apart; the west pier extends 2,887 feet from the entrance lock into the lake.

The united length of the two piers is 4,980 feet. This harbor is of sufficient depth to admit vessels drawing ten feet water.

It was made in connection with the Welland Canal.

For a detailed description of the present condition of the works at this harbor—see Appendix No. 6, at pages 56 and 57.

For proclamations respecting tolls and regulations at this harbor—see Appendix No. 55, at page 434.

PORT COLBORNE.

Port Colborne is on the north shore of Lake Erie, and forms the upper entrance into the Welland Canal at Gravelly Bay.

The works consist of two piers, the longest of which, on the west side, is 2,364 feet in length, and the total distance from the Lock to its extremity in the Lake, is 3,843 feet.

The basin is 350 feet in width, and averages 800 feet in length; the channel between the piers averages 90 feet in width. This harbor also was made in connection with the Welland Canal, and is of sufficient depth to admit vessels drawing 10 feet of water.

For a detailed description of the present condition of the works at this harbor—see Appendix No. 6, at pages 56 and 57.

For proclamations respecting tolls and regulations at this harbor—see Appendix No. 55, at page 434.

PORT MAITLAND.

Port Maitland lies at the mouth of the Grand River, on the north shore of Lake Erie, and is connected by a short branch canal with the navigable feeder of the Welland Canal.

The only works required at this harbor were two lines of piers to protect the entrance into the large basin of deep water formed by the Grand River.

These piers were constructed in connection with the Welland Canal; they commence at a point on the lake shore 2,000 feet from the outer end of the Broad Creek branch of the canal, and extend 1,500 into the lake; the channel between the piers is 180 feet in width, and is navigable for vessels of 10 feet draft of water.

For a detailed description of the present condition of the works at this harbor—see Appendix No. 6, at pages 57 and 58.

For proclamations respecting tolls and regulations on this harbor—see Appendix No. 55, at page 434.

PORT DOVER.

This harbor lies at the mouth of the Patterson Creek, on the north shore of Lake Erie, 49 miles above the upper entrance of the Welland Canal at Port Colborne.

The works consist of two parallel piers 75 feet apart and projecting into the lake about 1,000 feet.

The united length of the two piers is 2,040 feet, and the channel between them is 10 feet in depth at low water.

Vessels enter between these piers into the Creek, which, for a distance of about ¼ of a mile, is wide and sufficiently deep to admit schooners.

On the 28th January, 1832, a Joint Stock Company, under the name of "The *President, Directors & Company* of the *Port Dover Harbor*, was incorporated by an Act 2, Will. IV., cap. 14.

The works were to be commenced within two years, and completed within seven years from the date of the Act. Capital stock not to exceed £5,000 ($20,000).

In 1835 another Act was obtained, extending the term fixed for its completion to seven years from 1835.

In 1837—660 lineal feet of pier work had been constructed by the Company, at a cost of £2,125 ($8,500); and on the 4th of March of that year an Act was passed (7 Will. IV., cap. 86) authorizing a loan of £3,500 to the Company, with power to increase their capital stock to £10,000 ($40,000).

In 1841 the time of completion was again extended to seven years, by Act of Parliament, (4th and 5th Vic, cap. 77 of 18th September).

In 1843 (July 29) the works were transferred by the Company to the Government. The piers were then repaired, and extended into deep water (1844).

The total expenditure, by the Government on these works, up to the date of their sale in 1850, was $38,697.30; and on the 15th October of that year (1850), the harbor was sold to "The Port Dover Harbor Company" for the sum of $30,400, under an Order in Council of 13th August, 1850.

In 1863 the harbor was resumed by the Government, and it has since been repaired and improved.

The total expenditure since the resumption of the works, up to the 30th June, 1867, is $5,694.31.

For a detailed description of the present condition of the works—see Appendix No. 9, at page 70.

For a description of the works executed on this harbor during the year ending the 30th June, 1867—see Appendix No. 36, at page 353.

For statement respecting sale of this harbor—see Appendix No. 26, at page 312.

For proclamations respecting tolls and regulations at this harbor—see Appendix No. 55, at page 434.

PORT BURWELL.

Port Burwell lies on the north shore of Lake Erie, about 90 miles above Port Colborne, or the head of the Welland Canal.

The works consist of two lines of piers 173 feet apart, the united length of which is 772 feet.

A Company was incorporated in 1832 for the purpose of constructing the works necessary to form a harbor at this point; and on the 4th March, 1837, an Act was passed granting to the Company a loan of £3,000 to be applied to the works.

On the 19th October, 1840, Mr. Burwell, on behalf of the Company, surrendered these works to the Government by deed.

Other Acts having reference to this harbor were passed in 1849, 1851, 1855; and in 1860, on the 19th May, an Act was passed, 23 Vic., cap. 103, annulling the deed of surrender to the Government, of the lands forming part of or lying contiguous to this harbor, and repealing that portion of the schedule attached to Cap. 28, Consolidated Statutes of Canada, which vested this harbor and inner basin in the Crown.

The only expenditure by this Department in connection with Port Burwell Harbor, since the Union, is $546, in 1842, for a survey of the harbor, and a projected road to West Oxford on the River Thames.

For proclamations respecting tolls and regulations on this harbor—see Appendix No. 55, at page 434.

PORT BRUCE.

This harbor lies at the mouth of Cat Fish Creek, on the north shore of Lake Erie, 100 miles above Port Colborne, at the head of the Welland Canal.

The works consist of two piers extending into the Lake—the one 700 and the other 750 feet, with a space of 115 feet between them.

This harbor was constructed by the "Port Bruce Harbor Company," and in 1857 and 1858 the Government granted them an aid of $6,000.

The total expenditure by the Department in connection with this harbor is $6,267.47.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PORT STANLEY.

This harbor is situated at the mouth of Kettle Creek, on the north shore of Lake Erie, some 110 miles above the mouth of the Welland Canal at Port Colborne.

The works consist of two long parallel piers, and of crib-work extending into the lake. The piers are 92 feet apart, and their united length is 3,627 feet.

The works were commenced by Government Commissioners, appointed under an Act of Parliament, 17th February, 1827–8th, Geo. IV., cap. 18.

At the Union of the Provinces, the works were placed under the charge of the Board of Works; and the expenditure, in debentures, up to that date, was $30,000, of which $22,000 bore interest at 6 per cent.

The piers have since been renewed and improved, and on the 1st September, 1859, they were transferred to the London and Port Stanley Railway Company.

The total expenditure by the Department, since the Union, is $230,531.88.

For statement respecting the sale of this harbor—see Appendix No. 26, at pages 312 and 313.

For proclamations respecting tolls and regulations on this harbor—see Appendix No. 55, at page 433.

RONDEAU.

This harbor is situated at Pointe aux Pins, on the north shore of Lake Erie, 140 miles above Port Colborne at the entrance of the Welland Canal. Pointe aux Pins projects into the lake, and encloses a natural basin of about 6,000 acres in extent, with a depth of from 10 to 11 feet water. The communication between the basin and the lake is over a sand bank about 120 feet broad, some parts of which are a few feet above the level of the water.

The works constructed at this harbor consist of a breakwater—intended to close several of the channels through the bar—retaining only one channel, which was deepened and protected on each side by lines of crib-work.

These improvements were commenced in 1844, and they were suspended in 1848, when nearly completed.

In 1856 the Chief Engineer of the Department reported that the breakwaters intended to protect the beach had been very successful; but that the strong current that had been forced through the established channel had undermined the piers on each side of it: the consequence was that they had sunk down so low as to have become more an obstruction than a protection to any vessel seeking refuge in the harbor.

He reported further, that the works could be properly repaired by the expenditure of a small amount of money, and that if they were repaired, this harbor could be made one of the best on the lake.

Subsequent reports show that the works have been rapidly falling to decay, and that the lake has broken through the bar.

The total expenditure by the Government on these works, up to the present day, is $74,737.70.

On the 1st July, 1851, this harbor was sold to the Rondeau Harbor Company for the sum of $8,004.

An Order in Council was passed on the 28th of April, 1856, authorizing the transfer of Rondeau Harbor to the Rondeau and St. Clair Plank Road Company, after the same should be resumed by Government. The Attorney General for Upper Canada, acting in virtue of this Order in Council, transmitted orders on the 26th of July 1856, to the Sheriff of Kent, to take possession of the harbor, and place it under the custody of the Collector of Customs at Rondeau; these orders were executed by the Sheriff, on the 4th of August following.

For statement respecting the sale of this harbor—see Appendix No. 26, at pages 312 and 313.

For proclamations respecting tolls and regulations on this harbor—see Appendix No. 55, at page 434.

PENETANGORE OR KINCARDINE.

Kincardine Harbor is on the eastern coast of Lake Huron, 106 miles from Port Sarnia, at the foot of the lake.

The works consist of two parallel lines of piers placed 100 feet apart—the northern one is 540 feet long, and the southern one 290 feet long.

These improvements were commenced in 1856 by the Government, and completed, as far as they could be, with the limited means placed at the disposal of the Department.

The total expenditure by the Government on these works, up to the end of the fiscal year ending 30th of June, 1867, is $19,044.

In 1865, $4,500, payable after the completion of the works, were granted as an aid to the Municipal Council of the Township of Kincardine in its efforts to improve this harbor, and, on the 30th of June, 1867, the Municipality was proceeding with the improvements.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

INVERHURON.

This harbor also lies on the eastern coast of Lake Huron, 114½ miles above Port Sarnia.

The improvements at this Port consist of a pier extending 450 feet into the lake. It was built in 1856 and 1857. The total expenditure by the Government in connection with the works up to this date is $15,125.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PORT ELGIN.

Port Elgin is on the east coast of Lake Huron, 128 miles above Sarnia.

In 1857 and 1858, an incorporated Company, aided by a grant of $4,000 from the Government, constructed a pier at this place, extending some 380 feet into the lake, to 13 feet water.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

SAUGEEN OR SOUTHAMPTON.

The harbor of Saugeen is at the mouth of the river of that name, on the east coast of Lake Huron, 133 miles above the foot of the lake at Sarnia.

Chantry Island, lying off the mouth of the Saugeen, affords a certain protection to this harbor; but, from the course taken by the waters, a bar is formed annually at the mouth of the river. This bar is constantly shifting in its position, and is dangerous to vessels visiting the port.

The works designed by the engineer to whom this duty was intrusted, consisted of a pier or breakwater so adjusted as to give the current a direction which would prevent the reformation of the bar.

The Government granted $10,000 to commence this work, and in 1858, some 400 feet of the breakwater were constructed, which was as much as this grant would accomplish.

This breakwater must be extended to the required limits to render the present construction fully efficient.

As stated in the report for the year ending 30th June, 1866, the sum of $3,500 was appropriated as an aid to the Municipality in order to continue the improvements of this harbor, and this sum will be paid as soon as the works agreed to be executed by the Municipality are reported to be sufficiently advanced.

The total expenditure on these works by this Department up to the present date amounts to $10,236.39.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

CHANTRY ISLAND.

Chantry Island is a small rocky island about three-quarters of a mile long, with shoals on all sides, except towards the mainland, where the water, at no very great distance from the shore, is from 17 to 30 feet deep.

It lies about one mile off Southamptom.

At the north-east end of the island, the Government maintains a light-house, and in connection with this light-house the Department has constructed a breakwater extending towards the mainland.

The breakwater is 650 feet long, and has about 18 feet water at its outer end. It was constructed in 1856, and raised in 1865.

This work is of great advantage to vessels navigating these waters, affording shelter during rough weather, and good anchorage.

The total expenditure by the Department in connection with this work up to the month of June, 1867, amounts to $31,910.95.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

OWEN SOUND.

The works executed here consist of the improvement of the channel of the Sydenham River from its mouth up to the Town of Owen Sound, and in forming a basin sufficiently large to admit of vessels turning within the harbor.

The works were executed by the municipality of Owen Sound, under the directions of the engineer of the Department, and the Government in 1856 and 1866 granted various sums to assist the municipality in carrying out these improvements.

The total expenditure by the Department in connection with these works up to the 30th of June, 1867, amounts to $13,000.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

MEAFORD.

This harbor is situated some 20 miles west of Collingwood.

The works consists of a pier 500 feet long, with fourteen feet water alongside.

The pier was built by the local municipality, assisted by a government grant.

It was constructed in 1856 and 1857.

The total expenditure by the Department in connection with this work amounts to $6,000.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

PIER AT L'ORIGNAL.

OTTAWA RIVER.

The Village of L'Orignal is on the south shore of the Ottawa River, about 6½ miles above the head of the Carillon and Grenville Canals at Grenville.

A pier extending into the river some 554 feet had been constructed here previous to the Union of the Provinces.

In 1857 and 1858 it was extended 800 feet forming a total length of 1,354 feet. The breadth of the pier is 24 feet, and at the outer end for the last 30 feet its breadth is increased to 100 feet.

The extension was constructed by the municipal authorities, aided by a grant of $2,000 made by the Government and paid in 1857 and 1858.

For proclamations respecting tolls and regulations on harbors in general—see Appendix No. 55, at page 434.

LIGHT HOUSES, BEACONS AND BUOYS.

The light-houses, beacons and buoys of the Province, are divided under three heads :

1. The light-houses, beacons and buoys, from the mouth of the St. Lawrence to Quebec, built by the Department, and placed under the management of the Quebec Trinity House. (The Quebec Trinity House has the charge of three light-houses above Quebec, viz :—St. Antoine, Ste. Croix and Portneuf).

2. The light-houses, beacons and buoys, between Quebec and Montreal, built and managed by the Montreal Trinity House.

3. The light-houses, beacons and buoys above Montreal, on the Upper St. Lawrence, on the Ottawa River, and on the Canadian shores of the upper lakes, built and retained under the immediate direction of the Department.

There are at present throughout the whole course of Canadian Inland Navigation 131 Provincial Light-Houses, thus distributed :—

Between the Straits of Belle-Ile and Quebec	24
" Quebec and Montreal (not including those between Quebec and Platon)	27
West of Montreal, on the St. Lawrence, the Lakes, and the Ottawa River, in charge of this Department	69
In charge of private individuals and Companies	11
Total	131

The total outlay by the Department of Public Works on Light Houses, Beacons and Buoys, from the Union to the 30th June, 1867, as shown by Appendix No. 70, pages 498 to 501, is $1,002,780.42.

This amount includes the following sums, viz. :—

Cost of the principal Light Houses, as stated in Appendix No. 62, at pages 452, 453.........	$878,624.67	
General expenditure on "Inland Light Houses," prior to 1st January, 1857—see Report of the Public Works for that year................	119,755.75	
Purchase of Pointe Claire Light-ship, as explained in Appendix No. 70, at page 499, and at end of the same Appendix....................	$4,400.00	
		$1,002,780.42

For detailed statement of expenditure incurred in repairs and management of Light-houses under the charge of the Department for the year ending 30th June, 1867—see Appendix No. 1, Statement No. 6, pages 7 and 8.

For general statement of expenditure on Light-houses by the Department of Public Works since the Union, 10th February, 1841—see Appendix No. 62, at page 452 and 453.

For tabular statement of the Light-houses, Beacons and Buoys in Canada, showing the names, positions, characteristics, dimensions, &c., of these Provincial Works, constructed, in progress of construction, or managed by the Department of Public Works and the Trinity Houses of Quebec and Montreal, and of those in charge of private individuals and companies—see Appendix No. 10, pages 71 to 95.

For a description of the works executed by the Department on Light-houses above Montreal, during the year ending the 30th of June, 1867—see Appendix No. 37, pages 354 and 355.

For proclamations respecting tolls and regulations on Light-houses—see Appendix No. 55, at page 434.

SLIDES AND BOOMS.

The slides and booms are works designed for facilitating the passage of timber to the sea-ports, and have been divided into four districts, as follows :—

1.—The Saguenay District.
2.—The St. Maurice District.
3.—The Ottawa District.
4.—The River Trent District.

THE SAGUENAY DISTRICT.

SAGUENAY RIVER.

The Saguenay discharges into the St. Lawrence, 122 miles below Quebec. It flows from the north-west, and is in length—from its mouth to the head of Lake St. John—138 miles.

The most important of the tributaries of the Saguenay, from its mouth upward, are the "Ste. Marguerite," "Riviére aux Outardes," "Valain," "Caribou," "Rivière des-Terres rompues," "Pin-gris," flowing from the North and West, upon its North side; and the "Petit Saguenay," "St. Jean," "Ha! Ha!" "Riviére à Mars," "Riviére du Moulin," "Chicoutimi," and "Riviére aux Sables," from the South and South-west, upon its South side.

The main tributaries of Lake St. John, at the head of the Saguenay, are the "Kacuathieue" and "Péribonca," from the North-east, on the North side of the Lake; the "Mist-Asshini" from the North, and the "Assuapmoussoin" from the North-west, at the head of the lake; the "Belle Riviére," "Kishpahiganish," "Métabetchoan," "Ouiatchoan," and "Ouiatchoanish," from the South-east, South and South-west, on the South side of the lake, (See Diagram No. VIII.)

The Government works are situated upon the southern outlet of this lake, known as "La petite décharge," and extend over a distance of six miles from the foot of "Gagnon's Rapids" to the foot of the Lake, 111 miles above the mouth of the Saguenay.

The works consist of:—

7 flat dams, of an aggregate length of	919 feet.
1 pier dam	40 "
2 glance piers	0
1 bulkhead	0
1 slide	5,840 feet.
1 boom	1,344 "
1 store-house	24 × 24 "

These works were commenced in 1856 and completed in June, 1860, with the exception of the store-house, which was not built till 1866. They were maintained without accident up to the spring of 1867; but during the high water of this season a portion of the slide and booms was carried away. Immediate steps were taken to have the necessary repairs made, yet on the 30th June, 1867, the repairs were not completed.

The total expenditure by the Department, on the construction of these works, amounts to $44,872.79—see Appendix No. 1, at page 3, Appendix No. 17, pages 156 and 157, and Appendix No. 70, at page 502.

For a detailed description of the present condition of the works,—see Appendix No. 11, at page 96, and also Appendix No. 17, at page 132.

For a description of the works executed by the Department in this district during the year ending the 30th of June, 1867,—see Appendix No. 38, at page 356.

For proclamations respecting tolls on Saguenay slides and Chicoutimi booms—see Appendix No. 55, at page 433.

For proclamations respecting tolls and regulations on Provincial slides—see Appendix No. 55, at page 433.

For statement showing:—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

THE ST. MAURICE DISTRICT.

ST. MAURICE RIVER.

The St. Maurice discharges into the St. Lawrence at Three Rivers, 74 miles above Quebec. This river flows from the north, and its length is about 300 miles.

Its principal tributaries are the Shawenegan, Mekinak, Matawan, Petit Bostonais, Grand Bostonais, Croche, Vermilion, Tranche, Grand Pierriche and Manouan, besides many lesser ones. (See Diagram No. VIII.)

The Government slides and booms in this district are on the St. Maurice River, and on one of its tributaries, the Vermilion.

LIST OF THE NAMES OF THE SLIDE AND BOOM STATIONS ON THE ST. MAURICE RIVER, IN THE ORDER IN WHICH THEY ARE MET ON ASCENDING THE RIVER.

	Distance from Mouth of River.
1. Mouth of River	0 miles.
2. Grès Falls	16 "
3. Shawenegan Falls	20 "
4. Grand-Mère Falls	29 "
5. Little Piles Falls	31½ "
6. La Tuque Falls	100 "
7. Plamondon's Eddy	106 "

The works at these seven stations consist of:—

43,181 lineal feet of booms;
1,000 " slides;
3,316 " dams and side piers;
73 mooring piers;
64 anchor piers;
3 dwelling houses for slide keepers; and
6 store houses.

The works at the Mouth of the River, Grès, Shawenegan and Grand-Mère Falls, were built in 1852, and were opened in the Spring of 1853.

Those at La Tuque Falls were completed in 1855; at Little Piles in 1863; and at Plamondon's Eddy they were commenced in 1866 and completed, as far as the balance of the appropriation for works on this river would permit.

The channel through Managance Rapids, 18 miles above the Grand Piles Rapids, was deepened in the summer of 1856 and 1857.

THE VERMILION RIVER.

This river discharges into the St. Maurice from the north-west, at a point about 116 miles above its mouth. Its length is about 90 miles.

The works on the Vermilion extend from about one mile above its mouth to the Iroquois Falls, five miles farther up.

The works consist of:—

2,677	lineal feet of booms.
550	" slide.
682	" dams and side piers.
2	mooring piers.
1	anchor pier.
1	dwelling house for slide keeper.
1	storehouse.

These works were constructed by private individuals, and were purchased by Government in May, 1866, for the sum of $2,695.52.

The total expenditure by the Department, on the construction of these works, amounts to $269,043.03,—see Appendix No. 1, at page 3, Appendix No. 17, pages 156 and 157, and Appendix No. 70, at pages 502 and 503.

For a detailed description of the present condition of the works,—see Appendix No. 12, pages 97 to 103, and also Appendix No. 17, pages 132 to 135.

For a description of the works executed by the Department in this district during the year ending the 30th of June, 1867,—see Appendix No. 39, pages 357 and 358.

For proclamations respecting regulations and tolls on St. Maurice River and Provincial slides—see Appendix No. 55, at page 433.

For statements showing :—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

OTTAWA DISTRICT.

RIVER OTTAWA.

The remotest sources of the Ottawa lie to the south-east of Hudson's Bay, near the 49th parallel of latitude, where they are separated by the Highlands from the waters running towards the north.

The upper portion of the Ottawa River descends from the north-east towards the south-west, as far as Lake Temiscamingue, a distance of about 300 miles; then suddenly turning towards the south-east, and following this general direction for about 400 miles, it discharges into the St. Lawrence, at the head and foot of the Island of Montreal.

Its total length is about 700 miles, from its principal outlet at the Village of Ste. Anne or head of the island, and it drains an area of about 57,800 square miles.

The most important of the tributaries of the Ottawa River are the "Rivière du

Nord," "Rivière Rouge," "North Petite Nation," "South Petite Nation," "Rivière du Lièvre," "Gatineau," "Rideau," "Madawaska," "Bonnechère," "Coulonge," "Black River," "Petewawa," "Rivière du Moine," and the "Matawan." (See Diagram No. VII.)

No works to assist the descent of timber down the Ottawa or its tributaries had been constructed by Government previous to the Union of the Provinces in 1841. Private individuals had, however, built slides at various places, viz., at the Chaudière Falls, the Chats, Portage du Fort, Calumet Island, and on the Madawaska River.

The works at the Chaudière Falls, near Ottawa City, consisted of two slides, one on the north shore and the other on the south side of the river.

The slide on the north shore of the river was built in 1829 by Philemon Wright. This slide, with the right of way along the bank of the river opposite the works, was purchased by the Government of the United Provinces of Upper and Lower Canada on 6th October, 1849, for the sum of $40,000.

The slide on the south side was placed between Islands lying near the south shore of the River. It occupied the channel which passes between Chaudière Island on one side and Albert and Victoria Islands on the other. It was constructed in 1835 by George Buchanan, under the authority of a Government license of occupation for 10 years, dated 7th Sept., 1835, and it was assumed by the Government at the expiration of the lease, in 1845.

At the Chats Rapids a slide was built by George Buchanan, under a Government license of occupation, during pleasure, dated 18th February, 1835. This work was also assumed by the Government, at the expiration of the lease, in 1845.

At Portage du Fort a slide was constructed in 1839 by Hugh Bolton. It was carried away by a spring freshet in 1840, re-built in 1841 by John Poupore, sen., and purchased by the Government on the 16th April, 1845, for the sum of $1,700.

At the Calumet the slide was in the channel passing to the south of Grand Calumet Island, at the Rocher Fendu Island. It was built by permission of the Government, about the year 1843, by David Moore. This gentleman obtained a Government license, dated 31st August, 1835, which, in consideration of his building and maintaining the slide, secured him possession of the same for a term of 10 years, at a rent of $4 per annum, with the privilege of collecting a toll of 5s. upon every crib of timber that passed down the slide. These works having been rendered useless by new works constructed by the Government, a compensation of $6,000 was awarded by arbitration to the heirs of Mr. Moore, in 1861.

The slides on the Madawaska River were commenced prior to the Union, by lumbermen, and continued afterwards by a Joint Stock Company, incorporated by Act of Parliament, dated 17th December, 1853, under the name of the "Madawaska River Improvement Company."

Since the Union of the Provinces of Upper and Lower Canada in 1841, various other works have been constructed by private parties, but none of them are noticed here, except such as have been either purchased by the Government or have been assumed by the Government without purchase.

The first slides constructed by the Government, in the Ottawa District, were commenced, in 1843, at the "High Falls" and "Ragged Chute," on the Madawaska, and at the Mountain; the Grand Calumet and the Deux Joachims on the Ottawa.

The Government works connected with the descent of timber in this District are on the following rivers:—

On the	Ottawa, main river	11 stations.
"	Gatineau	1 "
"	Madawaska	15 "
"	Coulonge	1 "
"	Black	1 "
"	Petewawa	31 "
"	Rivière du Moine.	

The total expenditure by the department on the construction of these works, as shown by statement No. 1, Appendix No. 1, at page 3, amounts to			$762,769.69
But to arrive at the actual cost of the river works, we must deduct the following sums included therein. viz.:—			
Amount paid for damages in 1862–63		$11,520.00	
Cost of road from Portage du Fort to Calumet		23,302.56	
Bridge, Riviere aux Atocas	$ 500		
Hattfield	3,000		
Bonnechere	1,200		
Madawaska	4,000		
		8,700.00	
			43,522.56
Total cost of Ottawa Slides			$719,247.13

For details,—see Appendix No. 70, pages 503 to 507.

LIST OF SLIDE AND BOOM STATIONS ON THE OTTAWA RIVER.

The distances given are measured on the latest Maps, following the channel through which lumber is floated down the river.

Names of Stations.	Distance from mouth of Ottawa, at Ste. Anne.
1. Carillon	27 miles.
2. Chaudière. { north side, Hull. south side, Ottawa. }	98 "
3. Chaudière (little)	100 "
4. Remous	102 "
5. Chats Station	131 "
6. Head of Chats	134 "
7. Chenaux	152 "
8. Portage du Fort	156 "
9. Mountain	161 "
10. Calumet	163 "
11. Joachim Rapids	249 "

The works at these eleven stations consist of:—

2,000	lineal feet of	canal;
3,834	"	slides;
29,855	"	booms;
8,655	"	dams;
345	"	bulkheads;
1,981	"	bridges;
52	piers;	
3	slide-keepers' houses; and	
3	store-houses.	

1. *Carillon.*—At Carillon the works were commenced in 1857, completed in 1859, and extended in 1860 and 1861.

2. *Chaudière* (*north side*).—It has already been stated that the slide built in 1829 by Mr. Wright, was purchased by the Government in 1849. In 1861 and 1862 the old slide was removed, and two new slides, sufficiently large to admit cribs, were constructed.

Chaudière (*south side*).—It has also been previously stated that the slide built here by Mr. Buchanan, between Chaudière and Albert and Victoria Islands, as a private enterprise, was assumed by the Government in 1845. In the same year Government added four new slides in this place; dams, head-gates, booms, &c., have been added since, to facilitate the use of the water-power.

3. *Little Chaudière.*—The slide here is on the north shore of the rapids, and was built in 1845 and 1846.

4. *Remous.*—Booms and piers were constructed here in 1857 and 1858.

5. *Chats.*—The old slide built here by Mr. Buchanan, as a private enterprise, was assumed by Government in 1845, as above stated. A new slide, sufficient to pass cribs, was built in 1845 and 1846.

6. *Head of Chats.*—Mooring piers constructed here in 1857.

7. *Chenaux.*—Booms completed here in 1860.

8. *Portage du Fort.*—The old works built here by private individuals were assumed by the Government in 1845, and were reconstructed on the present scale in 1851 and 1852.

9. *Mountain.*—A slide constructed here in 1843 was enlarged between the years 1845 and 1848, and again in 1852.

10. *Calumet.*—The old works here were purchased by the Government. New slides were constructed in 1843, and improved in 1845. The lower slide was reconstructed in 1862.

11. *Joachims.*—Slide and dam commenced in 1843. Portions of the works were carried away by the current in the spring of 1844, and were immediately rebuilt. They were again seriously damaged in 1845, and reconstructed in 1846 and 1847. Obstructions in the channel at Rocher Capitaine, some 20 miles above the Joachims, were removed in 1844 and in 1854.

For a statement of water power and other property leased on the Ottawa River—see Appendix No. 25, pages 306 to 309.

For a detailed description of the present condition of the works—see Appendix No. 13, pages 103 to 108; also, Appendix No: 17, pages 134 to 140.

For a description of the works executed by the Department in this district, during the year ending the 30th of June, 1867—see Appendix No. 40, pages 359 and 360.

For proclamations respecting tolls and regulations on Ottawa slides and on Provincial slides—see Appendix No. 55, at page 433.

For proclamations respecting tolls on the Carillon slides, and on the Chaudière and Chenaux booms—see Appendix No. 55, at page 433.

For statements showing:—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

GATINEAU RIVER.

In ascending the Ottawa, the Gatineau is the first tributary possessing Government works. The Gatineau flows from the north, and discharges into the Ottawa, at a point about 96 miles from the mouth of the Ottawa, at Ste. Anne. Its length is about 400 miles, and it drains an area of about 9,000 square miles.

The Government works are all at one station, about one mile from the mouth of the river.

These works consist of:—

3,071 lineal feet of canal;
4,138 " booms;
52 " bridge;
10 piers; and
1 slide keeper's house.

The Canal and Boom were made in 1848-'9. The works were enlarged and reconstructed in 1861.

For a detailed description of the present condition of the works on this river—see Appendix No. 13, at page 108; also, Appendix No. 17, at pages 140, 141.

For a description of the works executed by the Department, during the year ending the 30th June, 1867—see Appendix No 40, at pages 359 and 360.

For proclamations respecting tolls and regulations on the Gatineau River works and Provincial slides—see appendix No. 55, at page 433.

For proclamations respecting tolls on the Gatineau booms—see Appendix No. 55, at page 433.

For statements showing:—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

MADAWASKA RIVER.

In ascending the Ottawa, the Madawaska is the second tributary on which the Government have provided works for the descent of lumber.

The length of the Madawaska is about 240 miles, and it drains an area of about 4,100 square miles. It flows from the south, and discharges into the Ottawa at some 136 miles above Ste. Anne.

List of the names of Slide and Boom Stations on the Madawaska, numbered from the mouth of the river upwards :—

1. Mouth of River;
2. Arnprior;
3. Flat Rapids;
4. Balmer's Island;
5. Burnstown;
6. Long Rapids;
7. Springtown;
8. Calabogie Lake;
9. High Falls;
10. Ragged Chute;
11. Boniface Rapids;
12. Duck's Islands;
13. Bailey's Chute;
14. Chain Rapids;
15. Opeongo Creek.

The works at these stations consist of :—

1,750 lineal feet of slides;
18,179 " booms;
4,080 " dams;
182 " bridges;
43 piers;
1 slide keeper's house; and
1 work shop.

The works constructed by the Madawaska River Improvement Company are located in the upper section of the river. The first Government works on the river were commenced in 1843, and were gradually extended as required.

For a detailed description of the present condition of the works on this river—see Appendix No. 13, pages 108 to 110; also, Appendix No. 17, pages 142 to 147.

For a description of the works executed by the Department during the year ending 30th June, 1867—see Appendix No. 40, at pages 359 and 360.

For proclamations respecting tolls on the Madawaska, Ottawa and Provincial slides—see Appendix No. 55, at page 433.

For statements showing :—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

THE COULONGE RIVER.

The Coulonge is the third tributary in ascending the Ottawa on which the Government have placed slides and booms.

This river drains an area of about 1800 square miles, and its length is about 160 miles. It flows from the north and discharges into the Ottawa, 184 miles above the mouth of that river, at Ste. Anne.

The only works built by Government on this river are a single-stick timber slide, of 2,056 feet in length, completed in May, 1865, a dam 173 feet long at the head of the chute, and a house for the slide-keeper. Certain old works built by private parties, and necessary to the working of the new slide, were purchased by Government (under an award dated 20th Feb., 1867) for a sum of $4,342.18. Above the Government slides there are some other works belonging to private parties.

For a detailed description of the present condition of the works on this river—see Appendix No. 13, at pages 110 and 111; also, Appendix No. 17, at pages 146 and 147.

For proclamations respecting regulations and tolls on the Coulonge River works and on the Ottawa and Provincial slides—see Appendix No. 55, at page 433.

For statements showing:—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

THE BLACK RIVER.

Ascending the Ottawa, the Black River is the fourth tributary upon which Government works have been placed.

This river flows from the north and empties into the Ottawa at a point about 193 miles above Ste. Anne.

Its length is about 128 miles, and the area drained by it, is about 1,120 square miles.

The slides here were constructed by private parties about thirty years ago, and were renewed by them at various times.

These works were purchased by Government in 1867, at a price (fixed upon by arbitration) of $12,500.

They consist of:—

1,139 lineal feet of single-stick booms;
873 " slide;
346 " glance pier;
135 " flat dam.

For a detailed description of the present condition of the works on this river—see Appendix No. 13, at page 111; also, Appendix No. 17, at pages 146 and 147.

For a description of the works executed by the Department during the year ending the 30th June, 1867—see Appendix No. 40, at pages 359 and 360.

For proclamations respecting regulations and tolls on the Black River, Ottawa and Provincial slides—see appendix No. 55, at page 433.

For statements showing:—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

THE PETEWAWA.

This is the fifth tributary, in ascending the Ottawa, upon which Government slides and booms have been made.

The length of the Petewawa is about 138 miles, and the area of the territory drained by it is some 2,200 square miles.

It flows from the south and discharges into the Ottawa, 218 miles above Ste. Anne; one mile from its mouth the Petewawa separates into two branches, but, on this one mile there are seven stations; then, on the north branch there are sixteen more stations, and on the south branch eight stations.

LIST of the Slides and Booms on this river, in the order in which they occur, reckoning from the mouth upwards:—

1. Mouth of the river,
2. First Chute,
3. Second Chute,
4. Third Chute,
5. Bois dur,

NORTH BRANCH.

1. Half mile Rapid;
2. Crooked Chute;
3. Between High Falls and Lake Traverse;
4. Thompson's Rapids;
5. Sawyer's Rapids;
6. Meno Rapids;
7. Below Trout Lake;
8. Strong Eddy;
9. Cedar Islands;
10. Foot of Devil's Chute;
11. Devils Chute;
12. Elbow of Rapids;
13. Foot of Long Sault;
14. Middle of Long Sault;
15. Head of Long Sault;
16. Between Long Sault and Cedar Lake (south shore);
17. Between Long Sault and Cedar Lake (north shore);
18. Cedar Lake.

SOUTH BRANCH.

1. First slide;
2. Second slide;
3. Third slide;
4. Fourth slide.
5. Fifth slide;
6. Sixth slide;
7. Seventh slide;
8. Eighth slide.

The works at these 31 stations are as follow:—

ON THE MAIN RIVER.

2,963 lineal feet of slides;
8,469 " booms;
2,077 " dams; and
7 piers.

ON THE NORTH BRANCH.

480 lineal feet of slides;
2,671 " booms;
1,131 " dams; and
23 piers.

ON THE SOUTH BRANCH.

2,134 lineal feet of slides;
388 " dams.

The Government works on this river were commenced in 1857, and have since been gradually extended. Several important works were added in 1863 and 1864.

For a detailed description of the present condition of the works on this river—see Appendix No. 13, pages 111 to 114; also, Appendix No. 17, pages 148 to 151.

For a description of the works executed by the Department during the year ending 30th June, 1867—see Appendix No. 40, at page 359.

For proclamations respecting tolls on the Petewawa, Ottawa and Provincial slides—see Appendix No. 55, at page 433.

For statements showing:—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

RIVIÈRE DU MOINE.

The sixth and last tributary of the Ottawa upon which Government works have been executed is the "Du Moine."

The length of this river is about 120 miles, and it drains an area of about 1,600 square miles.

It flows into the Ottawa from the North, and empties into it at a point about 256 miles above Ste. Anne.

The first slide was constructed in 1851–'2 by a Joint Stock Company, incorporated on the 25th January, 1851, under the name of "The Rivière du Moine Boom and Slide Company." The works were enlarged and improved by the Government from 1862 to 1864.

The works on this river consist of a pier and retaining boom, at its mouth, a single-stick slide, and a series of flat dams from the mouth upward; they may be detailed as follows, viz:—

300	lineal feet of	slide;
800	"	booms;
1,824	"	dams; and
6	piers.	

For a detailed description of the present condition of the works on this river—see Appendix No. 13, at page 114, also Appendix No. 17, at pages 152 and 153.

For a description of the works executed by the Department on this river during the year ending the 30th June, 1867—see Appendix No. 40, at pages 359 and 360.

For proclamations respecting tolls and regulations on Ottawa and Provincial slides—see Appendix No. 55, at page 433.

For statements showing:—The gross revenue, the expenditure for repairs, management, collection of tolls, &c., and the net revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867,—see Appendix No. 68, pages 476 to 478.

ROADS AND BRIDGES.

LOWER CANADA.

The system under which the common roads were principally constructed formed part of the feudal "régime" which was transplanted to the Colony by the "Edicts and Ordinances of Louis XIV."

Nearly the whole of the roads in Lower Canada were made and maintained under the superintendence of the "*Grand Voyer,*" or Chief Overseer (an officer appointed by the Governor General, and paid out of the Provincial Revenue), by each proprietor throughout the extent of his own lands.

The Grand Voyer was invested with extensive powers. He laid out the roads, and those portions which he deemed too burdensome to be executed by the ordinary mode, were declared by him to be *Public Works,* and he had the power of naming a certain number of persons to take charge of them.

In 1832 the powers exercised by the Grand Voyer were transferred to the Road Commissioners, who exercised them up to the year 1841, when mostly all the roads were given over to the Municipal Authorities under whose charge they have remained up to the present time.

UPPER CANADA.

At the first sitting of the Parliament of Upper Canada, at Newark, in 1793, an Act was passed placing the roads under the control of a Superintendent elected by the resident Rate-payers. This Superintendent was invested with powers nearly equivalent to those exercised by the Grand Voyer of Lower Canada.

The law enacted that every Rate-payer should perform statute labor, either in person or by substitute, for the purpose of making and maintaining the roads in repair. The Superintendent declared the number of days of statute labor to be performed per head, which he determined according to the necessities of the roads under his charge.

Complaints arose against this system, because it took from the poor settler as much obligatory labor as from the wealthy proprietor, and a proportionate rate, according to property, was afterwards struck.

Since 1850 the roads in Upper Canada, except several highways, have been entirely under the control of the local Municipalities, in virtue of the Municipal Act, 13 and 14 Vic., ch. 15. It was only in 1804 in Upper Canada, and in 1815 in Lower Canada, that Government began to give aid to the settlers by appropriating a portion of the revenue to the making of roads; the grants for this purpose were at first small, but were increased by degrees to large sums.

The great highways of communication which, in Upper Canada as well as in Lower Canada, were not transferred to the Municipalities, remained under the control of Government.

The system adopted in their construction and maintenance is not the same in all cases·

The Department of Public Works has made a few of the main roads in the two Provinces of Upper and Lower Canada.

The roads known as " Colonization Roads," are made by the Bureau of Agriculture.

The roads known as "Turnpike Roads" are made, improved and kept in repair, by Trustees appointed by His Excellency the Governor, in virtue of various Acts of Parliament granting or advancing a portion of the funds necessary for the construction of these roads, and authorizing the Trustees to raise the balance, by way of loan, on the credit and security of tolls levied under the Acts applying to the various roads, and, in certain cases, under the guarantee of the Province.

The roads and bridges built by this Department are usually transferred, either to the Municipalities through which the roads pass or to Companies, with power to levy tolls on the traffic for the purpose of maintenance.

The following table contains the names of the roads made or improved by the Department, since the Union in 1841, and of the places between which they are made—their length, date of completion, and cost.

In the Appendix, will be found further details, in reference to the Counties, Townships and Seigniories traversed by the various sections of the roads,—the length and description of each road, whether common, gravelled, planked or macadamized,—the description of the most important bridges on the various roads,—the cost of construction of the roads and bridges, before and since the Union,—and whether they have been sold or otherwise disposed of, with the date of sale and the amount for which they were sold.

LIST OF ROADS

Made, improved, or in progress of construction, under the Department of Public Works, with the expenditure thereon, embracing the Main Provincial Highway from Gaspé Basin, on the south side of the Gulf of St. Lawrence, and from Portneuf, 181 miles below Quebec, on the north shore of the River St. Lawrence, Lower Canada, to Sandwich on the River Detroit, and Port Sarnia, at the foot of Lake Huron, Upper Canada.

NAMES OF ROADS.	Total Length of road, when completed, in miles.	Length of road now completed, in miles.	Date of completion.	Cost of construction since the Union 10th Feb., 1841
LOWER CANADA.				$ cts.
From mouth of Métapédiac along the Ristigouche to S. end of Kempt Road. Included below in Métapédiac Road	....	....	....	2,922 76
Coast road on the North side of Baie des Chaleurs, from the end of the Kempt road, at the head of the Baie des Chaleurs, to the head of Gaspé Bay, on the South side, including 2¾ miles of branch road to Belle Anse........	176.75	176.75	1847	96,751 83
Coast road, from end of road on North side of Gaspé Basin, around Arnold's Bluff and up the North-west arm of Gaspé Bay on its South side to Pointe aux Navets, thence crossing at the proposed scow ferry to the North side of the North-west arm of Gaspé Bay, thence along the North side of the Bay down to the Peninsula........	12.00	3.50	Unfinished.	1,995 00
From Peninsula, going Eastward along North side of Gaspé Bay to Grande Grève near Cape Gaspé........	10.00	10.00	1864	6,700 00
From Peninsula on North side of Gaspé Bay to Griffin's Cove, or to intersection of road on South shore of St. Lawrence........	7.50	7.50	1861	5,700 00
South shore Gulf road, from Cap des Rosiers to Quebec, 426½ miles long, of which 228¼ made by inhabitants, 86½ by Government, of which 69⅜ between Métis and Cap de Chatte, and 17⅛ between Latourelle and Cap des Rosiers, and 111¾ remaining to be constructed between Latourelle and Great Fox River........	198.25	86.50	1866	46,555 63
Kempt road, from Métis, on the St. Lawrence, to Cross Point, at the head of Baie des Chaleurs.	97.75	97.75	1832	29,064 00
Métapédiac road, from Ste. Flavie, on the St. Lawrence, to Cross Point, Baie des Chaleurs (including Ristigouche Road)	110.50	Nearly 110.50	completed. 1867	187,870 85
Témiscouata road, from Rivière du Loup, on the St. Lawrence, to the Provincial Line between Canada and New Brunswick (completed in 1861, except 1½ miles which were completed only in 1867)	67.00	67.00	1867	204,376 01

LIST OF ROADS

Made, improved, or in progress of construction, under the Department of Public Works, with the expenditure thereon, &c.—*Continued.*

NAMES OF ROADS.	Total Length of road, when completed, in miles.	Length of road now completed, in miles.	Date of completion.	Cost of construction since the Union 10th Feb., 1841.
LOWER CANADA—*Continued.*				$ cts.
The North shore Gulf road, from Portneuf to Quebec, 176 miles long, of which 69½ made chiefly by inhabitants, 58½ by Department of Public Works, and 48 remaining to be constructed, chiefly between Portneuf and Ste. Catherine, Westward of the Outlet of the River Saguenay.	106.50	58.50	Unfinished.	19,878 28
N.B.—Out of the 58½ miles made by the Department 29 are between Portneuf and Ste. Catherine, and were constructed at a cost of $8,569 48, and 29½ miles are between Baie St. Paul and St. Joachim, the cost of which was $11,305 80. This sum is not shown in App. No. 19, not having been ascertained when Appendix was prepared.				
Malbaie and Grande-Baie road, from Lake Nairn or Seigniory of Malbaie, to Village of St. Alexis (Bagot) at Baie des Ha! Ha! (Grande Baie) River Saguenay	63.00	25.00 38.40	Sum'r road Winter "	15,956 73
Cartier road, on the East side of Malbaie river, from Malbaie to its intersection with Anse St. Jean (a winter road built by the Bureau of Agriculture in 1864)................	36.75	36.75	Unfinished.	800 00
The Kennebec road, from Pointe Lévis to Boundary Line between Canada and the United States	90.50	90.50	1851	13,022 18
The Gosford road, across the Seigniories of St. Giles and Ste. Croix, and the Townships of Nelson, Inverness, Halifax, Ireland, Wolfstown, Ham, Weedon, or from Beaurivage River to Dudswell Line..................	62.50	62.50	1843	43,666 60
N. B.—The Gosford road extends from Chaudière Bridge to Sherbrooke, a distance of 121 miles, of which only 62½ have been made or improved by the Department of Public Works.				
The Arthabaska road from Gentilly, on the St. Lawrence, to St. Norbert, Arthabaska, 28.50 miles, and from Inverness Church on the Gosford road to Kingsey Terminus, *via* St. Norbert............ 49.20 "	77.70	77.70	1848	62,175 35
Chambly to the Province Line at Hereford, *viâ* St. Césaire, Granby and Outlet of Lake Memphremagog..................	100.92	100.92	1850	133,754 72
Granby and Sherbrooke, 45 miles long. The expenditure by the Dept. of Public Works was only on 7 miles of this road..................	7.00	7.00	1848	1,920 00
St. John's and Spier's Corners, *viâ* St. Athanase...	14.67	14.67	1848	38,268 23

LIST OF ROADS

Made, improved, or in progress of construction, under the Department of Public Works, with the expenditure thereon, &c.—*Continued.*

NAMES OF ROADS.	Total Length of road, when completed, in miles.	Length of road now completed, in miles.	Date of completion.	Cost of construction since the Union 10th Feb., 1841.
LOWER CANADA—*Continued.*				$ cts.
Spier's Corners and Stanstead, *viâ* Brome's Corner.	60.00	60.00	1853	16,641 47
Sutton Mountain road....................................	4.50	4.50	1847	3,575 20
Potton Mountain road	8.00	8.00	1848	3,334 93
Caughnawaga and Chateauguay, between the village of Caughnawaga and the Seigniorial Line of Chateauguay..............................	2.81	2.81	1866	3,527 07
Caughnawaga and Ste. Martine, between the village of Caughnawaga and the road leading to Ste. Martine..	3.35	3.35		
Ste. Anne and Provincial Line, between the village of Ste. Anne, at the head of the Island of Montreal, and the Boundary Line between Upper and Lower Canada, following the North shore of the St. Lawrence..........................	30.25	30.25	1860	82,770 43
Portage du Fort and Calumet road or Chats Portage	7.71	7.71	1859	23,302 56
Amount shown in App. No. 19, p. 170, $1,033,220 98, to which $11,305 80 have been added above for cost of Chemin des Caps, since ascertained..	1,355.91	1,187.66	....	1,044,526 78
Deduct Kempt Road built prior to Union...........	97.75	97.75	....	29,064 00
Total in Lower Canada, since the Union, up to 1st July, 1867..	1,258.16	1,089.91	....	$1,015,462 78
(168.25 miles unfinished on the above roads.)				
UPPER CANADA.				
L'Orignal and Ottawa....................................	46.00	46.00	1852	23,756 00
Ottawa and Pembroke. (Expenditure only on part of road)..	85.00	85.00	1852	5,173 82
Lancaster and Hawkesbury, from Lake St. Francis to the Ottawa River. (Expenditure for repairs and 7 miles of new road)	40.50	40.50	1843	11,295 30
Cornwall and L'Orignal....................................	56.00	56.00	1847	3,581 72
Prescott and Ottawa City. (Expenditure for repairs)	60.00	60.00	1853	3,930 70

LIST OF ROADS

Made, improved, or in progress of construction, under the Department of Public Works, with the expenditure thereon, &c.—*Continued.*

NAMES OF ROADS.	Total Length of road, when completed, in miles.	Length of road now completed, in miles.	Date of completion.	Cost of construction since the Union 10th Feb., 1841.
UPPER CANADA—*Continued.*				$ cts.
Kingston and Ottawa City. (Expenditure for repairs)	164.00	164.00	1853	6,000 00
Lancaster Road, 2 miles East of Village	4.20	4.20	1863	8,284 00
Coteau and Cornwall, exclusive of Lancaster Road. (Expenditure for improvements and repairs on account of inundation since construction of Dams at head of Beauharnois Canal)	26.00	26.00	1854	17,403 67
Kingston and Napanee. (Expenditure for improvements)	25.00	25.00	1847	4,373 30
Port Hope and Rice Lake	9.50	9.50	1845	29,146 29
Peterborough and Norwood	23.50	23.50	1850	3,267 43
Peterborough and Lindsay	23.00	23.00	1850	1,000 00
Lake Scugog and Narrows, Lake Simcoe, 45 miles. (Expenditure on 14 miles from Talbot River).	14.00	14.00	1848	8,000 00
Whitby or Windsor Harbor and Lake Scugog	19.00	19.00	1851	38,274 89
Narrows of Lake Simcoe to Sturgeon Bay or Coldwater Portage	22.00	22.00	1848	16,787 10
Toronto and Penetanguishene. (Includes Yonge Street or North York Road 33½ miles to Holland's Landing).	90.00	90.00	1853	213,700 61
Bradford to Bondhead	7.00	7.00	1849	
Bonhead to Barrie	22.00	22.00	1848	
Toronto and Saugeen, Lake Huron, 146 miles	Survey	only, prior to	1849, by gov	ernment.
Toronto and Rouge Hill road. (Kingston or East York Road)	17.00	17.00	1847	25,672 13
Toronto and Springfield. (Improved by Government. Dundas or West York Road)	16.25	16.25	1847	....
Toronto Lake Shore, road westward	4.00	4.00	not ascertain	ed.
Dundas and Owen Sound. (Partly constructed)	114.00	114.00	1852	22,111 07
Grimsby and Queenstown	31.25	31.25	1849	45,609 08
Hamilton and Port Dover, from Lake Ontario to Lake Erie	37.00	37.00	1846	170,858 85
Hamilton and Brantford, including Grand River Marsh Road and Hamilton and Ancaster Road.	23.75	23.75	1846	39,953 35
Brantford and London	57.50	57.50	1844	199,098 22

LIST OF ROADS

Made, improved, or in progress of construction, under the Department of Public Works, with the expenditure thereon, &c.—*Continued.*

NAMES OF ROADS.	Total Length of road, when completed, in miles.	Length of road now completed, in miles.	Date of completion.	Cost of construction since the Union 10th Feb., 1841.
UPPER CANADA—*Continued.*				$ cts.
London and Port Stanley	26.50	26.50	1844	128,794 37
Rondeau Harbour to Chatham and Amherstburgh road	10.00	10.00	1847	9,375 85
Chatham to junction of Port Stanley and London, or London and Chatham road	59.75	59.75	1845	156,700 47
Maidstone Cross and Chatham	50.00	50.00	1849	18,496 59
Amherstburgh and Maidstone Cross	16.00	16.00	1849	
Amherstburgh and Sandwich	14.00	14.00	1846	3,845 63
Sandwich and Maidstone Cross	12.00	12.00	1845	7,790 23
The Tecumseth road, from Sandwich to Chatham.	52.00	52.00	1842	4,223 15
London to Port Sarnia	61.50	61.50	1844	74,560 68
Total in Upper Canada, since the Union up to 1st July, 1867	1,339.20	1,339.20		1,300,564 50
Total in Lower Canada. Brought down ...	1,258.16	1,089.91		1,015,462 78
Total in Lower and Upper Canada, since the Union up to 1st July, 1867, inclusive of $91,095.72 spent on Bridges	2,597.36	2,429.11		$2,316.027 28

The total expenditure shown in Appendix No. 19, at page 173, is $2,304,721.48; to this sum $11,305.80 have been added in the preceding statement, for the cost of the "Chemin des Caps," which had not been ascertained when Appendix No. 19 was prepared.

The total cost of the bridges constructed under this Department since the Union up to the 30th June, 1867, as shown by Appendix No. 20, pages 180 to 191, amounts to $560,285.08.

The expenditure before and since the Union, from Government and other funds, on the Roads and Bridges of Canada, will be found in Appendix No. 70, pages 511 to 516.

For tabular statement of Roads made, improved, or in progress of construction under the Department of Public Works, with the expenditure thereon before and since the Union—see Appendix No. 19, pages 166 to 173.

For tabular statement of Turnpike Roads under the control of Trustees, with expenditure thereon before and since the Union—see Appendix No. 19, pages 174 to 179.

For tabular statement showing the dimensions, cost, &c., of Bridges constructed, in progress of construction, improved or repaired by this Department—see Appendix No. 20, pages 180 to 191.

For description of *Métapédiac Road*—see Appendix No. 18, pages 158 to 165.

For description of works executed by the Department on the *Métapédiac* and *Ristigouche* Roads during the year ending 30th June, 1867—see Appendix No. 42, pages 363 to 366.

For table of distances between Quebec and Gaspé Basin, *viâ Métapédiac* and South Shore Gulf Roads—see Appendix No. 20½, pages 192 and 193.

For table of distances between Quebec and Halifax, *viâ Métapédiac* Road—see Appendix No. 20½, at page 194.

For table of distances between Quebec and Halifax, *viâ Témiscouata* Road—see Appendix No. 20½, Statements Nos. 4, 5, and 6, at page 195.

For table of distances between Quebec and St. Andrews, New Brunswick, *viâ Témiscouata* Road—see Appendix No. 20½, at page 196.

For table of distances between Quebec and St. John, New Brunswick, *viâ Témiscouata* Road—see Appendix No. 20½, Statements Nos. 8 and 9, at pages 197 and 198.

For tabular statement of distances from Halifax, St. John, Portland and Quebec to Liverpool—see Appendix No. 20½, at page 199.

For situation of the Military Roads—Témiscouata and Métapédiac—see Diagram No. IX.

For statement of Roads and Bridges sold or to be sold, abandoned, &c.—see Appendix No. 26, pages 312 to 321.

For proclamations respecting tolls and regulations on Roads and Bridges—see Appendix No. 55, at pages 434, 435.

For summary of Acts concerning Turnpike Roads in Lower Canada—see Appendix No. 57, pages 437 to 443.

For tabular view of the River St. John from Fredericton to the Great Falls, New Brunswick—see Appendix No. 20½, at page 200.

PUBLIC BUILDINGS.

The Public Buildings of the Province are not all under the care of the Department of Public Works. The following is a list of those connected with this Department:—

HOUSES OF PARLIAMENT.

Quebec;
Ottawa;
Toronto.

GOVERNMENT HOUSE.

Spencer Wood, Quebec;
Government House, Montreal;
Rideau Hall, Ottawa;
Government House, Toronto.

OBSERVATORIES.

Observatory, Quebec;
Observatory, Toronto.

CUSTOM HOUSES.

Seven Islands;
Quebec;
Montreal;
St. Regis;
Dundee;
Kingston;
Toronto;
Hamilton;
Port Dalhousie;
Rondeau.

POST OFFICES.

Quebec;
Montreal;
Kingston;
Toronto;
Hamilton;
London.

HOSPITALS AND ASYLUMS.

Grosse-Ile Quarantine Station;
Emigrant Shed, Quebec;
Marine Hospital, Quebec.

COURT HOUSES.

The Old District Court House, Quebec;
District Court House, Three Rivers;
Sherbrooke Court House, Dis. of St. Francis;
The New District Court House, Montreal..

JAILS AND PRISONS.

The New District Jail, Quebec;
District Jail, Three Rivers;
Sherbrooke Old Jail, District of St. Francis;
Sherbrooke New Jail, District of St. Francis;
The New District Jail, Montreal;
The Reformatory Prison for Lower Canada, at St. Vincent de Paul.

DISTRICT COURT HOUSES AND JAILS COMBINED.

1. Magdalen Islands;
2. Percé (Gaspé);
3. New Carlisle (Gaspé);
4. Rimouski;
5. Chicoutimi;
6. Saguenay (Malbaie);
7. Kamouraska;
8. Montmagny;
9. Beauce;
10. Arthabaska;
11. Richelieu;
12. Bedford;
13. St. Hyacinthe;
14. Joliette;
15. Iberville;
16. Beauharnois;
17. Terrebonne;
18. Aylmer;
19. Algoma.

NORMAL SCHOOLS.

The Laval Normal and Model Schools, or the Old Château St. Louis, Quebec.

The Jacques Cartier Normal and Model Schools, or the Old Government House, Montreal.

DRILL SHEDS, GUN SHEDS AND BARRACKS.

The Quebec Drill Shed;
The Quebec Armory and Gun Shed;
The Ottawa Gun Shed;
The Toronto Gun Sheds;
The Toronto Barracks, New Fort;
The Hamilton Gun Shed.

MISCELLANEOUS BUILDINGS.

The Sewell Property, Quebec, (formerly Nautical School).

The Water Police Station, Quebec, (Old Custom House, Quebec).

The Geological Museum, Montreal.

The Buildings at the corner of Notre Dame Street and Jacques Cartier Square, Montreal.

The expenditure on Public Buildings before and since the Union, from Government and other funds, will be found in Appendix No. 70, pages 517 to 547.

For expenditure on public buildings during the year ending 30th June, 1867—see statement No. 3, in Appendix No. 1, at pages 4 and 5.

For a detailed description of the present condition and cost of the Parliament and Departmental Buildings, Ottawa—see Appendix No. 21, pages 201 to 243.

For a detailed description of Rideau Hall, Ottawa—see Appendix No. 22, pages 244 to 246.

For the description and cost of the Public Buildings constructed and improved in Upper and Lower Canada by the Department of Public Works—see Appendix No. 23, pages 247 to 284.

For description of works on Public Buildings executed during the year ending 30th June, 1867—see Appendix No. 43, pages 367 to 370.

For list of Public Buildings purchased, &c., by the Government, and under the control of the Department—see appendix No. 27, pages 322 to 327.

PROVINCIAL VESSELS.

Previous to 1853 frequent complaints were made on behalf of the shipping interest, that owing to the absence of Government Tug Boats on the River St. Lawrence, below Quebec, vessels were often delayed for many days by contrary winds, both in the river and in the gulf, that these delays were in many ways injurious to the commerce of the country; and that the want of Tug Boats was one of the principal causes why Marine Insurance on vessels visiting Canada was maintained at such high rates, and why the prices of Ocean freight charged by vessels trading with our Provincial Ports ran so high.

On the 15th November, 1853, the Commissioner of Public Works reported to His Excellency in Council, that it was highly expedient that the Government should give some encouragement to the formation of a superior class of Tug Boats to ply on the Lower St. Lawrence, and requested authority to receive tenders, from persons willing to undertake this service.

On the 4th of September, 1854, tenders were received and a contract was entered into with François Baby, by which that gentleman undertook "to establish and maintain, during the term of seven years, from the 27th of February, 1854, a line of Steam Tug Boats to run between Quebec and Bic, for the purpose of towing and aiding vessels coming up and going down the River St. Lawrence, and of relieving wrecks when directed to do so by the Commissioner of Public Works."

The Contractor bound himself to provide two Steam Tugs, of not less than 250 horse-power each, which were to be limited to certain rates of towage, and he was to receive from the Government an annual bonus of £7,965 ($31,860.) for the service.

It was further agreed, that pending the building of these boats, the Steamers *Admiral* and *Advance*, aided by the *Doris*, (vessels under the control of the Contractor,) should be temporarily placed on the line.

The service was performed by those vessels in 1854; but during this year, it was represented by the Board of Trade of Quebec, and other parties interested, that the establishment of such a line of vessels, as was required by the contract, would not prove suitable for the service expected from them.

The whole matter was therefore re-considered, and after some negotiation with the contractor, the first contract was cancelled, and on the 24th of August, 1855, a second one was entered into, by which the contractor engaged "to maintain during ten years from the 26th of Feb., 1855, a line of screw steamers of 300 horse power each, to run between Quebec and Anticosti, for the same purposes as mentioned in the first contract. The annual bonus to be paid by Government was to be £11,300 ($45,200), and the rates of towage to be charged by the contractor to the owners of vessels were fixed by the contract.

Finding the demand for towage too limited for the profitable employment of these vessels, the contractor reduced the authorized Schedule of rates in 1856. A further reduction having been recommended by the Board of Trade to the Government, an Order in Council was issued on the 16th June, 1857, enacting as follows :—

"That providing the contractor would make certain reductions in his charges for towing vessels, the Government would refund to the contractor the amount so deducted. The reductions agreed upon on these conditions were:

"Thirty per cent. for vessels towed from "Bic" and the "Brandy Pots" to Quebec, and *vice versâ.*

"Forty per cent. for vessels towed from Métis and below Bic to Quebec.

"Fifty per cent. for vessels towed from Anticosti and below Métis to Quebec, and *vice versâ.*"

The proportion to be paid by the Government, however, was not to exceed £7,500 ($30,000) during the first year, and not to exceed £5,000 ($20,000) for the following year, and the contractor not only made the diminution stipulated, but of his own free will he subsequently made a uniform reduction of 50 per cent. below the tariff authorized by his contract.

Notwithstanding these efforts by the Government and the contractor, ship-owners do not appear to have availed themselves of the facilities for towage offered to them, and for several years the contractor is represented as having lost heavily by his enterprise.

In 1859 it was thought to be desirable to establish a line of steam communication between Canada and the Maritime Provinces, for the conveyance of mails, and to increase the facilities for intercourse between these places; a contract was therefore entered into on the 6th of May, 1859, with Mr. François Baby, the proprietor of the *Lady Head*, a screw steamer, the only boat on the River St. Lawrence which was then considered fit for the service. The contractor engaged to perform with the *Lady Head*, seven monthly trips during the summers of 1859 and 1860, from Quebec to Gaspé, Paspébiac and Carleton or Dalhousie, for an annual bonus of £2,500 ($10,000).

Mr. Baby had also two contracts with the Trinity House, Quebec, obtained by public competition.

First.—For the laying down and taking up the buoys in the Lower St. Lawrence, carrying supplies to the river light-houses, and making voyages with the Pilots' apprentices at a yearly rate of £2,000.

Second.—Making trips to the light-houses at Belle-Ile, Forteau Bay, Anticosti and Cap Rosier, for the transport of provisions, materials and workmen when required for repairs. The first trip to be performed for £2,000, and the second for £1,000 ($4,000).

The various contracts above mentioned, and which were in force in 1859, may be summed up as follows :—

1. Tug service per year	£11,300
Add the 30 per cent. allowed by Order in Council on the 50 per cent. reduction made by the contractor, reported in 1859 as averaging £1,500 a year	1,500
2. Mail service to Lower Provinces	2,500
3. Buoy service and trips with Pilots' apprentices	2,000
4. Conveyance of light-house supplies, &c	3,000
	£20,300 ($81,200.)

The above services were performed by five vessels, viz.:—the "*Queen Victoria*," "*Napoleon III*," "*Lady Head*," "*Admiral*" and "*Advance*," the cost of these vessels to the contractor was represented as being upwards of £96,000 ($384,000).

In August, 1859, the contractor proposed to abandon to the Government all his contracts for the Tug, Trinity Light-house and Mail services, and to transfer to the Government the five steamers above named, on the payment by the Government of the three following sums, viz.:—

1. Contractor's debt to Bank of Upper Canada	£23,386—($93,544.)
2. The discharge of the balance due by him for advances made by Government	18,000— ($72,000.)
3. An actual payment to himself to wind up his business...	15,000— ($60,000.)
	£56,386—($225,544.)

By an Order in Council, dated the 23rd August, 1859, this proposition was accepted, subject to the sanction of Parliament; and this sanction having been obtained, an agreement to that effect, between the Commissioner of Public Works and Mr. Baby, was executed on the 8th of August, 1860.

Since then, the various services above-mentioned have been performed by these vessels, under the direct control of the Department.

On the 16th February, 1861, the steamer "*Admiral*" was sold to Messrs. S. & C. Peters, for the sum of $1,400.

The steamer "*Victoria*" sailed from Quebec on the 10th September, 1866, for Havana, where she arrived on the 24th of the same month. She remained at Havana five days, and left that port on the 29th September. On the 4th of October following she foundered at sea. She was insured for the sum of $33,000.

The service for the protection of the Canadian Fisheries in the Gulf of St. Lawrence was organized in 1852, and up to the 30th of June, 1867, it was under the direction of the Department of Crown Lands.

The service is performed by a Stipendiary Magistrate, whose duty it is to maintain order and peace, to administer summary Justice, and to enforce the observance of the Game and Revenue laws. The fisheries extend over a coast of about 1,028 miles in length.

The vessels necessary for this service were furnished to the Crown Lands Department by the Commissioner of Public Works, who is charged with keeping them in repair.

In the spring of 1852 the schooner "*Albion*" was chartered and equipped for this service.

In 1853, the steamer "*Doris*" was employed and, in 1854, the steamer "*Advance*" was placed in the service.

In 1855, a fast sailing schooner of about 100 tons register, named "*La Canadienne*," was built and fitted up for the service.

In November, 1861, she was stranded near Little Trinity River, about 270 miles below Quebec; but in the following summer she was got off and repaired, and is now performing the service for which she was built.

For account current of Provincial Steamers with this Department—see Appendix No. 44, at page 371.

For Expenditure on these vessels during the year ending 30th June, 1867—see Appendix No. 1, Statement No. 4, at page 6.

For description of Provincial Steamers and services rendered by the same—see Appendix No. 24, at pages 285 and 286.

PROVINCIAL ARBITRATORS.

All subjects of dispute between the Department with regard to contracts and the public, the valuation of property, claims for damages, &c., have been usually settled by arbitration.

Up to the year 1846, the Arbitrators were chosen in the following manner, viz.:—One by the Department, another by the claimant, and these two chose a third, as umpire.

By the 9 Vic., ch. 37, dated 9th of June, 1846, the Governor in Council was authorized to appoint three Arbitrators or Appraisers for Lower Canada and three for Upper Canada.

By the 22 Vic., ch. 3, of date 26th March, 1859, His Excellency the Governor General in Council was authorized to appoint one or such other number not exceeding three proper persons to be Arbitrators and Appraisers for the whole Province of Canada.

In pursuance of this Act, three Provincial Arbitrators were appointed by Order in Council, of date 7th November, 1860.

For Expenditure on Arbitrations and Awards, under this Department, during the year ending 30th June, 1867, see Appendix No. 1, Statement No. 4, at page 6.

For Statement of Awards made by Arbitrators, and claims still pending before them, for the year ending 30th June, 1867—see Appendix No. 45, at page 372.

THE FOLLOWING STATEMENTS ARE APPENDED TO THIS REPORT

No. 1.—Statement of the several Works under the charge of this Department, which are in use and yield revenue; showing, under different heads, the expenditure on construction, the amount paid for land damages, and the cost of repairs and management during the past year; also the total cost of construction, under this Department, to the 30th June, 1867.

No. 2.—Statement of the Public Works, under the charge of this Department, not yet completed, and unproductive; showing the expenditure for construction, repairs and management, during the past year; and the total expenditure for construction, up to the 30th June, 1867.

No.3.—Statement of the several Public Works and Buildings, in charge of this Department, or in course of construction under it, yielding no direct revenue, but in use for the public service; showing the amount expended thereon for construction, repairs and management, during the past year; and the total outlay upon them, up to the 30th June, 1867.

No. 4.—Statement of expenditure on certain miscellaneous services, under this Department, during the year ending 30th June, 1867.

No. 5.—Statement of the expenditure incurred, under this Department, for the repairs and management of the Ordnance Canals, for the year ending 30th June, 1867.

No. 6.—Detailed Statement of the expenditure incurred, in the repairs and management of the Provincial Light-houses, under the charge of this Department, for the year ending 30th June, 1867.

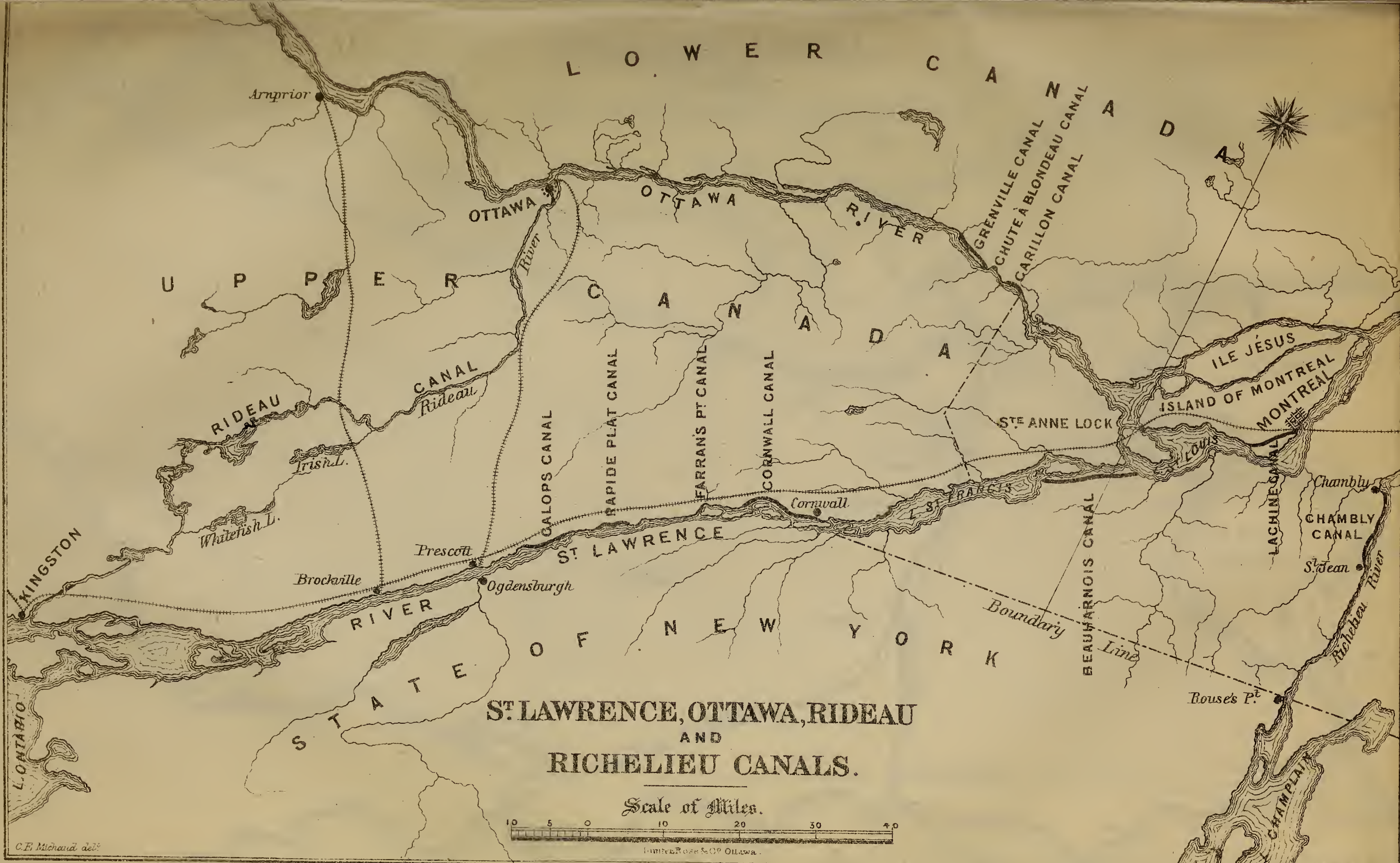
No. 7.—Abstract Statement showing the total amount expended under the Department of Public Works, during the year ending 30th June, 1867, as detailed in the foregoing statements numbered 1, 2, 3, 4, 5, and 6.

Appended to this report will also be found special reports from the Engineers and Superintendents employed by this Department, describing the works under their charge, the repairs and improvements effected thereon during the last fiscal year;—and other information in relation to the Public Works of the United Provinces of Upper and Lower Canada.

All of which is respectfully submitted.

J. CHAS. CHAPAIS,
Commissioner of Public Works.

DEPARTMENT OF PUBLIC WORKS,
Ottawa, 30th June, 1867.



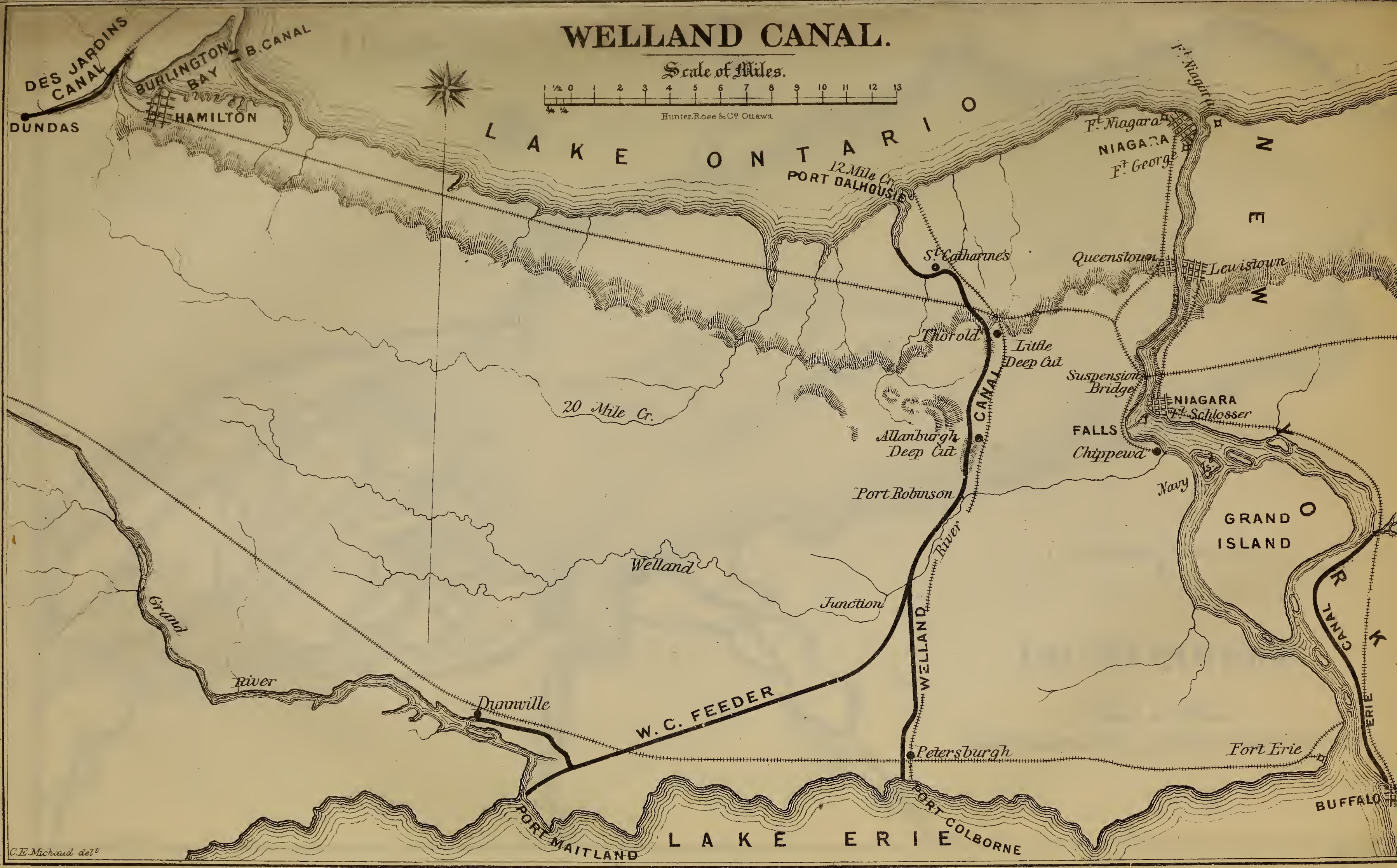
St. LAWRENCE, OTTAWA, RIDEAU AND RICHELIEU CANALS.

Scale of Miles.

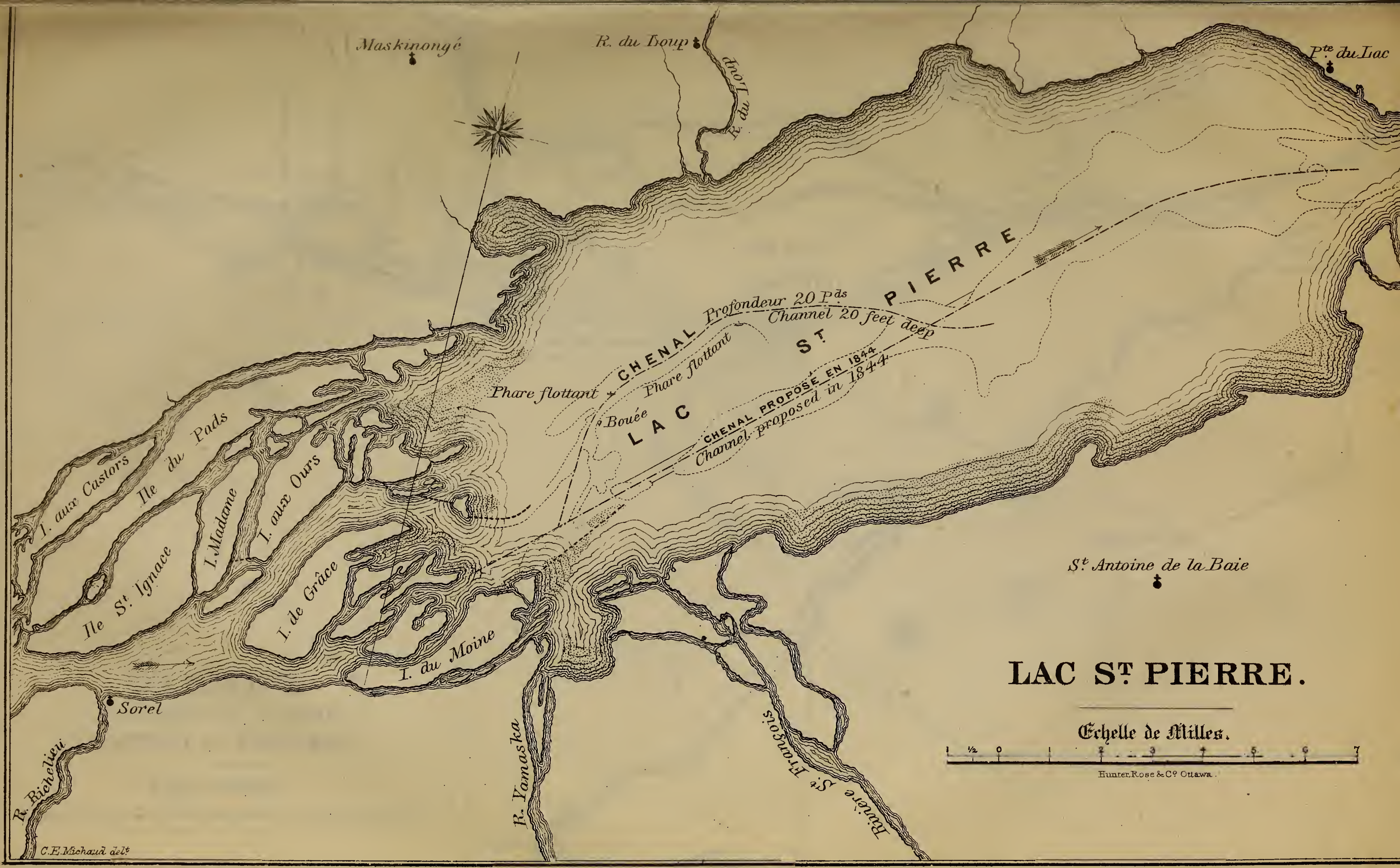
Hunter, Rose & Co. Ottawa.

No. II.

WELLAND CANAL.

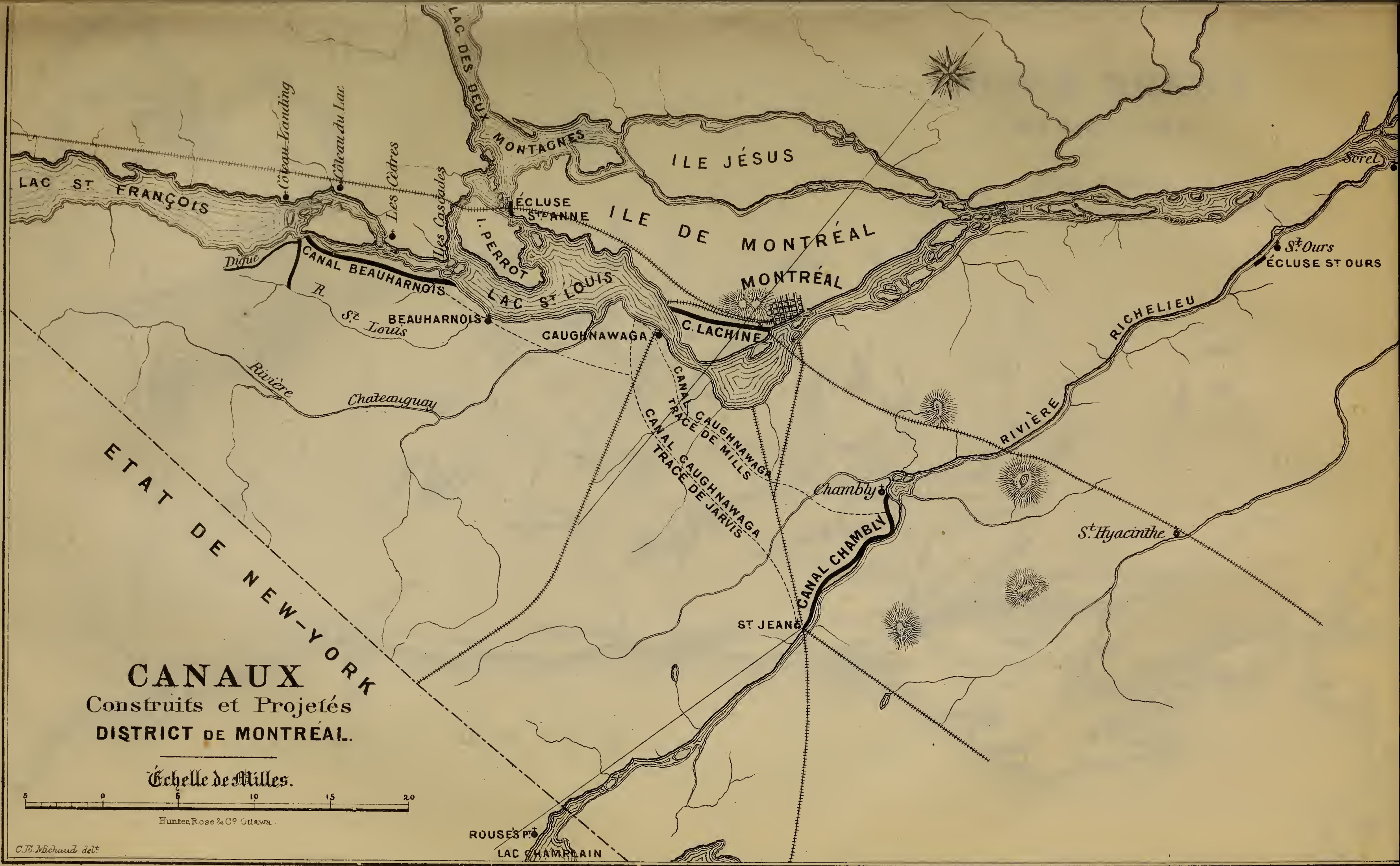


Nº III.



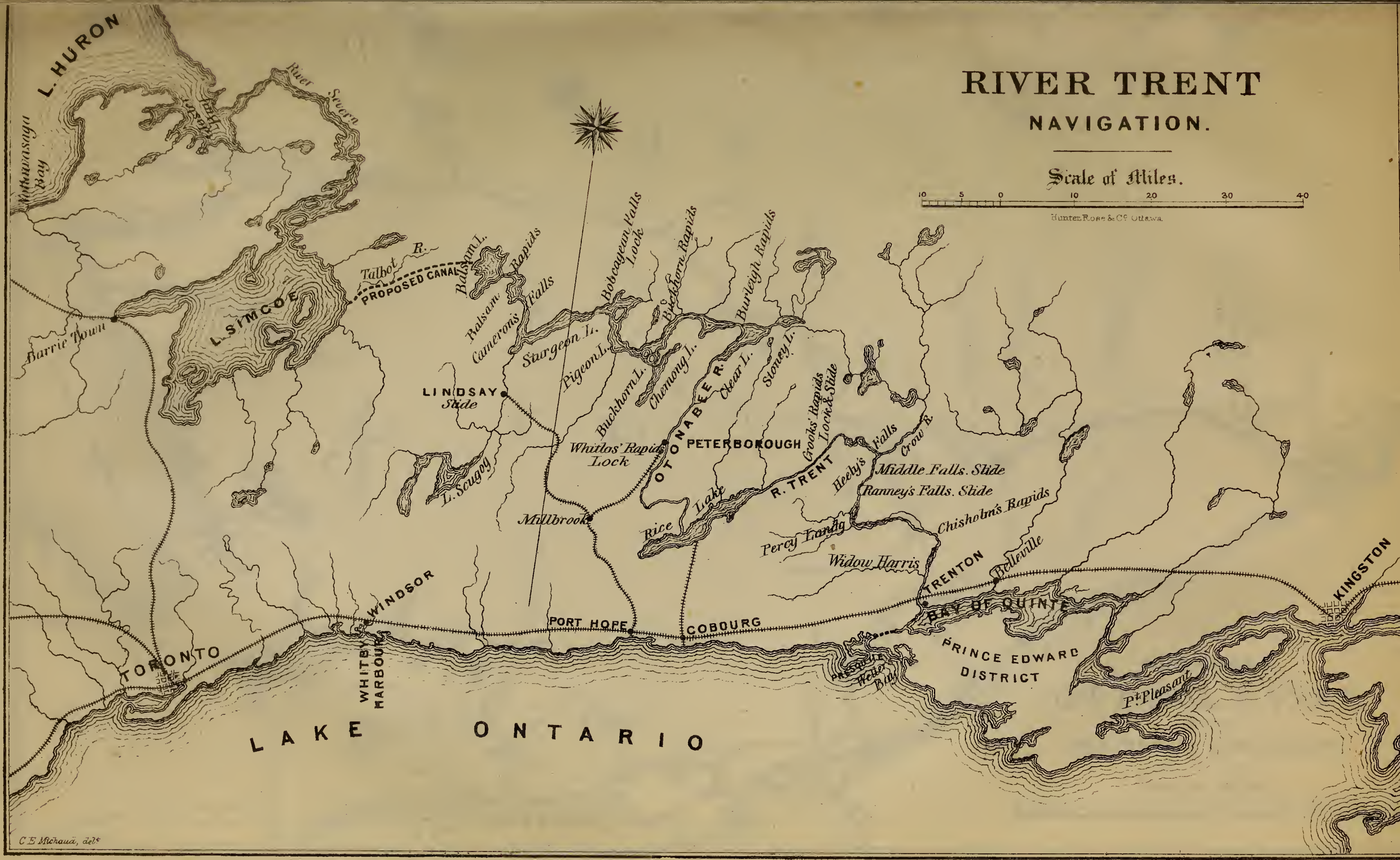
LAC S^T. PIERRE.

N°. IV.

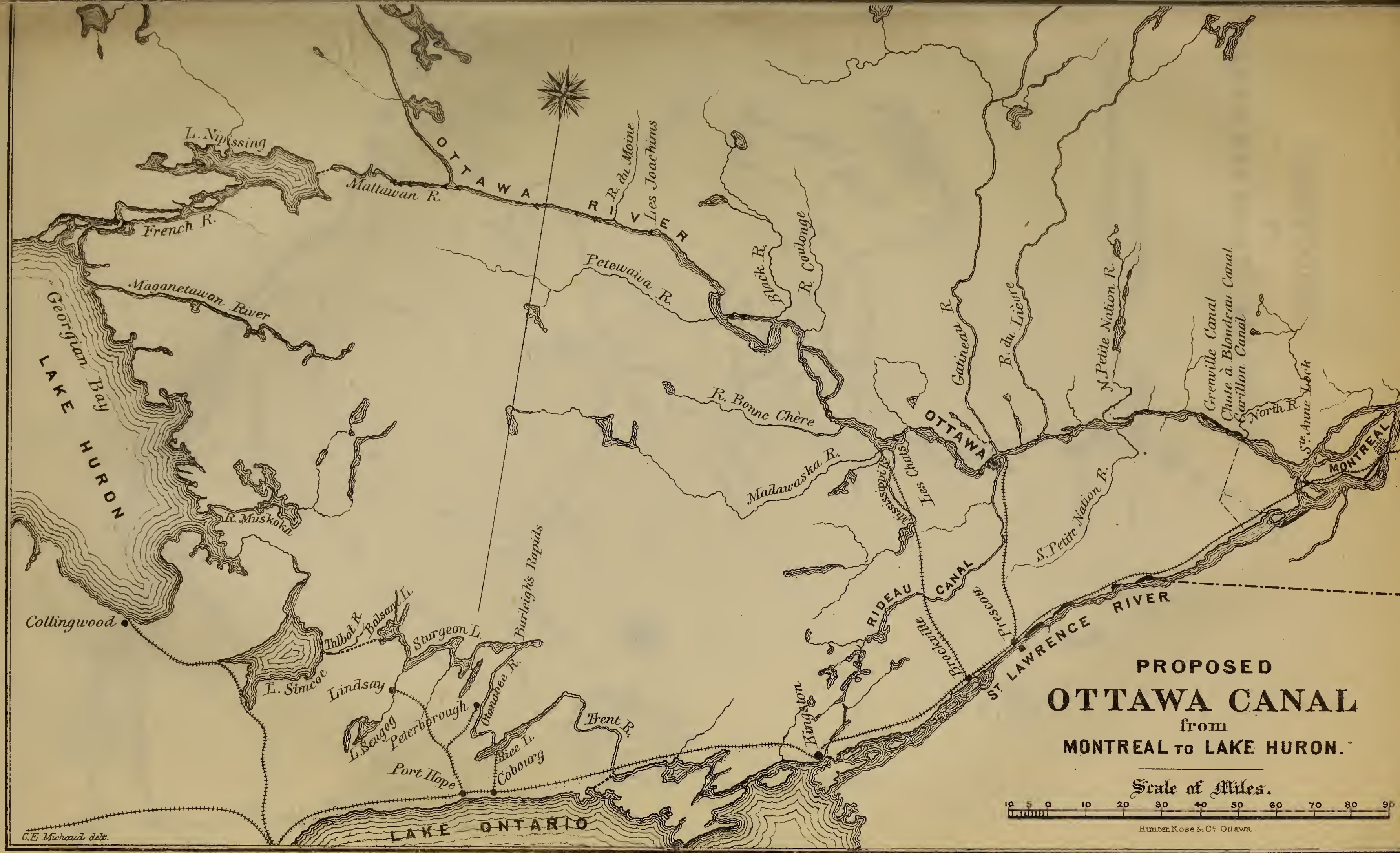
# CANAUX
Construits et Projetés
DISTRICT DE MONTRÉAL.

Échelle de Milles.

No. V.

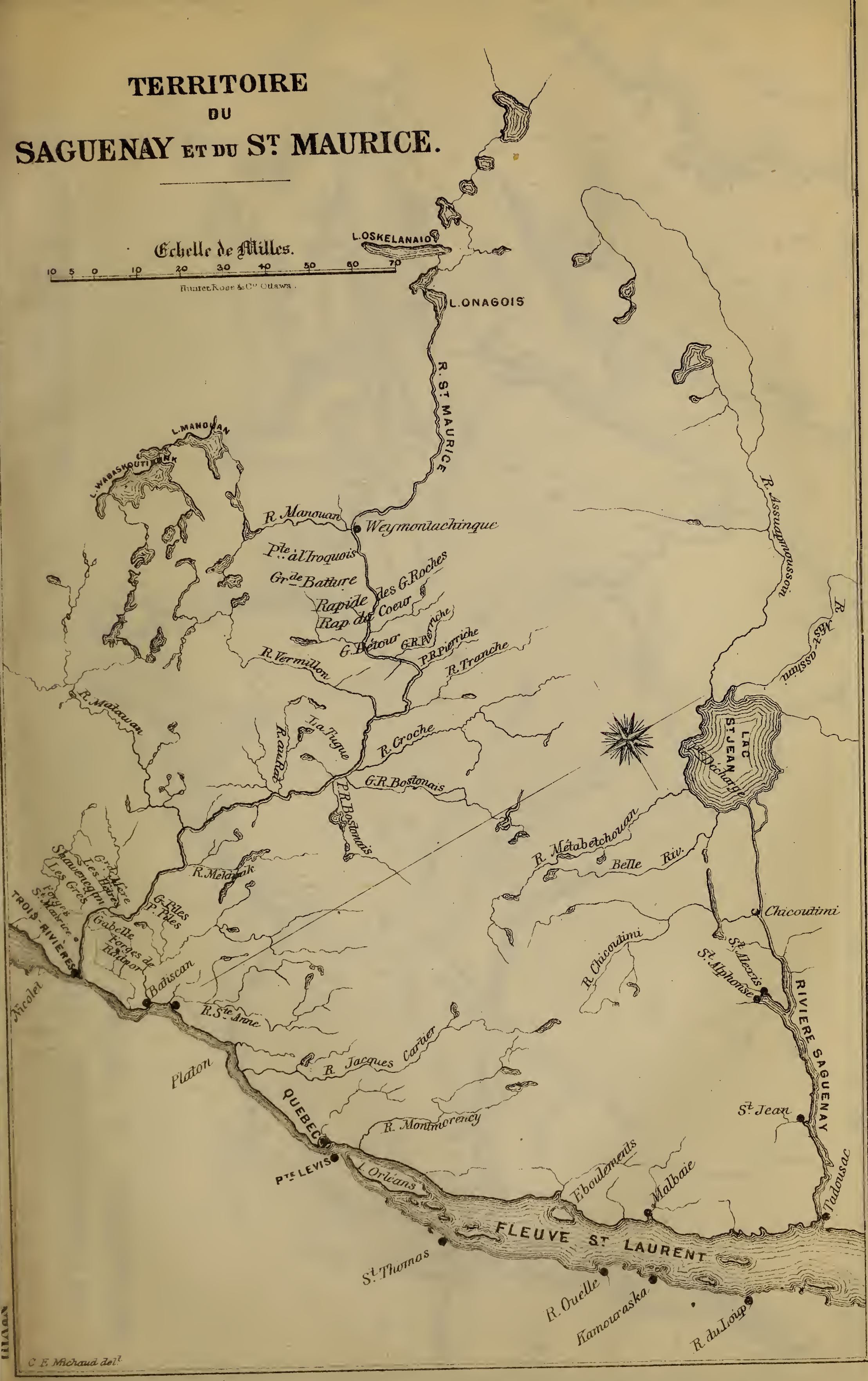

RIVER TRENT
NAVIGATION.
Scale of Miles.
10 5 0 10 20 30 40
Hunter, Rose & Co. Ottawa
L. HURON
Nottawasaga Bay
Hog Bay
River Severn
Barrie Town
L. SIMCOE
Talbot R.
PROPOSED CANAL
Balsam L.
Balsam Rapids
Camerons Falls
Sturgeon L.
Pigeon L.
Bobcaygeon Falls Lock
Buckhorn L.
Buckhorn Rapids
Chemong L.
Burleigh Rapids
Clear L.
Stoney L.
OTONABEE R.
LINDSAY
Slide
L. Scugog
Whitlos' Rapids Lock
PETERBOROUGH
Crooks' Rapids Lock & Slide
Rice Lake
R. TRENT
Heely's Falls
Crow R.
Middle Falls. Slide
Ranney's Falls. Slide
Chisholm's Rapids
Percy Landg
Widow Harris
Millbrook
TRENTON
Belleville
KINGSTON
BAY OF QUINTE
PRINCE EDWARD DISTRICT
Pt. Pleasant
PRESQU'ILE
Weller's Bay
TORONTO
WINDSOR
WHITBY HARBOUR
PORT HOPE
COBOURG
LAKE ONTARIO
C E Michaud, delt

No. VI.



PROPOSED OTTAWA CANAL from MONTREAL TO LAKE HURON.

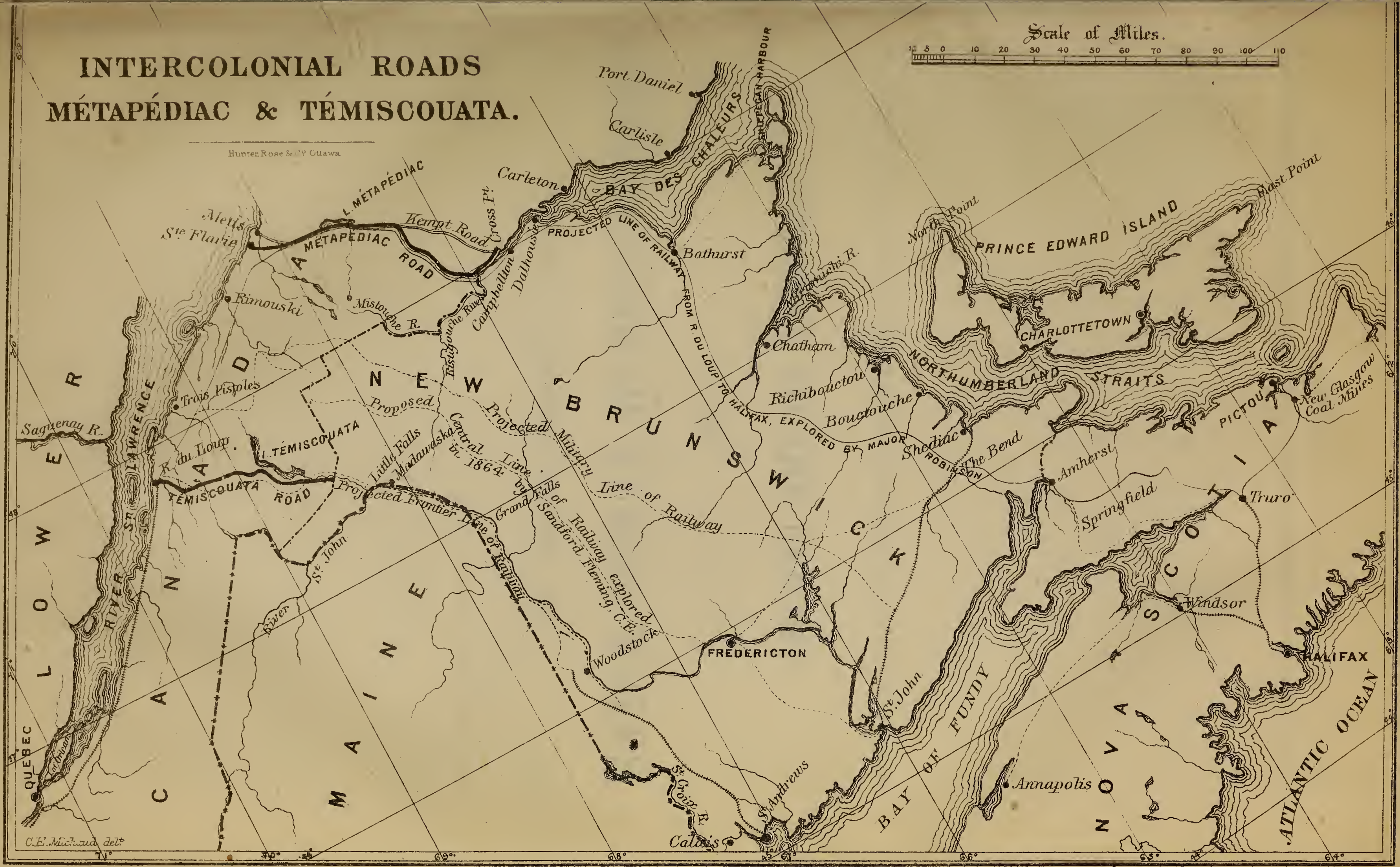
No. VII.



TERRITOIRE DU SAGUENAY ET DU S^T MAURICE.

INTERCOLONIAL ROADS
MÉTAPÉDIAC & TÉMISCOUATA.

Hunter, Rose & Co. Ottawa



No. IX.

APPENDIX TO THE REPORT

OF THE

COMMISSIONER OF PUBLIC WORKS,

FOR THE YEAR ENDING 30TH JUNE, 1867.

APPENDIX No. 1.

STATEMENT No. 1.

STATEMENT of the several Works, under the charge of this Department, which are in use and yield revenue; showing, under different heads, the expenditure on construction, the amount paid for land damages, and the cost of repairs and management during the year ending 30th June, 1867; also, the total cost of construction, under this Department, to the 1st July, 1867.

WORKS.	Expenditure on construction for year ending 30th June, 1867.	Amount paid for damages during the year ending 30th June, 1867	Total expenditure on construction to 1st July, 1867.	Cost of repairs and management for year ending 30th June, 1867
	$ cts.	$ cts.	$ cts.	$ cts.
Welland Canal	7,016 00	....	4,895,956 83	63,007 88
do extraordinary repairs to pier, Port Maitland	....	....	4,863 77	....
St. Lawrence Canals, viz:				
Lachine	5,012 59	....	2,149,128 70	24,883 20
Beauharnois	50 00	1,840 01	1,611,424 11	16,583 13
Cornwall	....	....	467,301 70	13,728 84
Williamsburgh	....	....	1,089,859 43	8,855 35
Junction	....	....	230,796 11	....
New Lock Gates	1,648 00	....	41,837 79	....
General expenditure	....	....	74,983 52	335 86
Chambly Canal	....	....	69,758 01	16,291 31
Ste. Anne Lock	....	....	114,596 49	1,244 09
St. Ours Lock	....	....	121,537 65	2,808 64
Burlington Bay Canal	....	....	291,044 49	....
Slides, Dams, &c.				
Ottawa	18,890 95	....	762,769 69	22,972 13
do reconstruction	....	....	27,413 94	....
St. Maurice	2,370 73	....	269,043 03	14,345 58
Trent, securing dams	....	....	2,380 34	....
Saguenay	....	....	44,872 79	1,321 05
Port Stanley Harbor	....	....	230,531 88	....
Union Suspension Bridge, reconstruction	....	....	5,266 60	....
Total	34,988 27	1,840 01	12,505,366 87	186,377 06

DEPARTMENT OF PUBLIC WORKS,
July, 1867.

J. BAINE,
Book-keeper.

STATEMENT No. 2.

STATEMENT of the Public Works, under the charge of this Department, not yet completed and unproductive; showing the expenditure thereon for construction, repairs and management, during the year ending 30th June, 1867, and the total expenditure for construction, up to the 1st July, 1867.

WORKS.	Expenditure on construction for year ending 30th June, 1867.	Total expenditure on construction to 1st July, 1867.	Cost of repairs and management for year ending 1st July, 1867.
	$ cts.	$ cts.	$ cts.
Chats Canal	....	373,191 98	....
Scugog Inland Navigation	....	492,486 31	4,834 26
Total	....	865,678 29	4,834 26

DEPARTMENT OF PUBLIC WORKS,
July, 1867.

J. BAINE,
Book-keeper.

STATEMENT No. 3.

STATEMENT of the several Public Works and Buildings, in charge of this Department, or in course of construction under it yielding no direct revenue, but in use for the public service, and authorized by legislative appropriations; showing the amount expended thereon for construction, repairs and management, during the year ending 30th June, 1867, and the total outlay upon them, up to the 1st of July, 1867.

WORKS.		Total outlay up to 1st July, 1866.	Expenditure for year ending 30th June, 1867	Total outlay up to 1st July, 1867.
		$ cts.	$ cts.	$ cts.
Parliament Buildings Government House	Toronto	274,815 05	424 74	275,239 79
Custom House	do			5,104 18
Post Office	do			28,066 07
Observatory	do			13,884 65
Female Lunatic Asylum	do			9.966 83
Osgoode Hall	do			159 30
Gun Sheds	do			3,679 23
Barracks repairs	do			657 69
Railway Inspector's Office	do			525 62
Mechanics' Institute, completing building	do			16,000 00
Custom House	Hamilton			47,027 82
Post Office	do			52,629 42
Gun Sheds	do			5,566 67
Post Office	London			40,536 06
Custom House	Kingston			45,010 24
Post Office	do			39,647 12
Lunatic Asylum and Jail	do			4,293 92
Court House and Jail	Algoma	2,142 13	9,689 75	11,831 88
Public Buildings	Ottawa	2,378,146 70	345,834 98	2,723,981 68
Rideau Hall	do	16,278 73	64,540 93	80,819 66
Court House	Montreal			308,083 57
do extraordinary repairs	do	30,491 83	100 00	30,591 83
Custom House repairs	do			1,257 63
Jail repairs	do			2,168 80
Post Office	do			3,037 97
Normal School	do			9,469 96
Armory	do			856 68
Government House	do		5,500 00	5,500 00
Marine Hospital	Quebec	106,526 99	3,384 51	109,911 50
Custom House	do			268,008 50
do reconstruction	do	22,492 60	7,454 83	29,947 43
Gun Sheds	do			4,880 42
Court House	do	2,534 32	139 15	2,673 47
Post Office and Parliamentary Buildings	do			59,891 18
do do additions	do			1,623 59
Spencer Wood, repairs	do			4,299 35
do reconstruction	do			28,015 71
Governor General's residence, in consequence of fire at Spencer Wood in 1861	do			9,991 67
Observatory	do			318 77
Normal School	do			7,181 06
Jail repairs	do			924 25
New Jail	do	123,940 17	13,991 95	137,932 12
New Drill Shed	do			8,488 81
Jails and Court Houses, C. E.				35,441 44
do do 20 Vic., c. 44		440,819 39	1,320 40	442,139 79
Court Houses and Jails, C. E., Repairs, viz.:				
St. John's		158 00	141 80	299 80
Aylmer				1,890 07
Three Rivers				4,108 62
St. Hyacinthe				541 42
Kamouraska		20,080 86	120 00	20,200 86
Percé				343 85
New Carlisle				113 12
Montmagny				439 25

STATEMENT No. 3—*Continued.*

WORKS.	Total outlay up to 1st July, 1866.	Expenditure for year ending 30th June, 1867	Total outlay up to 1st July, 1867.
	$ cts.	$ cts.	$ cts.
Magdalen Island		2,569 90	2,569 90
Sorel		59 70	59 70
Industrie		174 00	174 00
Arthabaska			90 50
Beauce	368 50	180 00	548 50
Sherbrooke			3,614 90
Chicoutimi			22 13
Beauharnois			190 90
Malbaie	47 19	847 74	894 93
New Jail, District of St. Francis	6,109 03	18,170 76	24,279 79
Court House and Jail, Ste. Scholastique, reconstruction	14,701 22	860 00	15,561 22
Reformatory, St. Vincent de Paul, reconstruction	31,927 52	39,023 44	70,950 96
Depôt at Anticosti			47 82
Governor General's residence, St. Lewis Street			48,855 82
Rents, repairs and maintenance of public buildings	493,412 20	31,949 32	525,361 52
Light Houses.			
Light Houses below Quebec			396,503 55
Light House apparatus, Quebec			54,602 16
Light House, Pointe St. Laurent	7,229 24	1,187 34	8,416 58
Light Houses (New) below Quebec			50,898 25
Pointe Pelée Light House			69,160 30
Snake Island Light House			10,430 04
Bay of Quinté Light Houses	3,000 00	1,344 12	4,344 12
Light Houses, Lake Huron			147,614 75
Light House apparatus, Lake Huron			74,949 16
Floating Lights above Lachine			26,397 93
Gaspé Bay and Harbor Buoys			787 11
Inland Lake and River Lights	18,498 71	5,722 97	24,221 68
Father Point Light House			1,453 61
Ottawa River Navigation			3,642 54
Roads.			
Canada and New Brunswick, by the Temiscouata	201,620 60	2,755 41	204,376 01
Metapediac, South			29,505 44
do North			16,382 59
Eastern Canada and New Brunswick, by the Metapediac	113,455 18	25,604 88	139,060 06
Ristigouche	453 85	2,468 91	2,922 76
Malbaie and Grande Baie			15,956 73
Matane and Cap de Chatte	29,033 86	168 10	29,251 96
Escoumains and Malbaie			7,208 56
do Port Neuf			1,360 92
Marmora			4,000 00
Garrison Road, Toronto			1,600 93
Gaspé Road	20,631 01	120 00	20,751 01
Côteau and Province Line Road			1,482 01
Côteau and Cornwall Road			8,284 00
Cornwall Road			510 22
Caughnawaga Road	2,859 93	667 14	3,527 07
Hamilton and Port Dover Road	18,918 78	27 70	18,946 48
York Roads			20,809 63
Batiscan Bridge repairs			642 00
Harbors and Piers.			
Port Bruce			6,267 47
Lake Huron	98,442 99	3,000 00	101,442 99
L'Orignal			2,000 00
Pier at St. Anicet			2,007 97
Landing Piers			768,971 02
Repairs to Piers	28,177 93	5,853 85	34,031 78
Pier at Port aux Quilles			103 45
Dredging Narrows and New Bridge, Lake Simcoe			10,138 30
do at Picton and Presqu'Ile			9,050 04
do operations	20,384 03	7,236 98	27,621 01

STATEMENT No. 3—*Continued.*

WORKS.	Total outlay up to 1st July, 1866.	Expenditure for year ending 30th June, 1867	Total outlay up to 1st July, 1867.
	$ cts.	$ cts.	$ cts.
Dredging vessels, steam pumps, &c	....	....	3,218 39
do at Ste. Claire Flats	....	....	19,984 45
Richelieu Rapids improvements (Ste. Anne de la Pérade)	....	....	13,713 96
North River and Petite Nation Bridge improvements	....	....	4,257 01
River Thames Navigation improvements	....	....	3,821 42
Deepening Lake St. Peter	....	....	103,240 50
Pier at Chantry Island	....	....	5,500 00
Gatineau and Petite Nation Bridges	5,934 40	2,344 32	8,278 72
Port Dover Harbor repairs	4,258 03	1,436 28	5,694 31
Total	....	606,415 90	....

Department of Public Works,
July, 1867.

J. BAINE,
Book-keeper.

STATEMENT No. 4.

Statement of Expenditure on certain Miscellaneous Services, under this Department, during the year ending 30th June, 1867.

	$ cts.
Provincial Steamers	46,523 87
Tug Service Upper St. Lawrence	12,012 06
Surveys generally	6,632 96
Arbitrations and awards	11,177 30
Removal to Ottawa	4,145 31
Quebec Water Police	150 00
Total	80,641 50

Department of Public Works,
July, 1867.

J. BAINE,
Book-keeper.

STATEMENT No. 5.

Statement of the Expenditure incurred, under this Department, for the repairs and management of the Ordnance Canals, for the year ending 30th June, 1867.

NAME.	Extraordinary Repairs.	Ordinary Repairs and Management.	Total Expenditure.
	$ cts.	$ cts.	$ cts.
Rideau Canal	....	31,170 67	31,170 67
do increasing water supply	....	....	....
do repairs at Hogsback	....	....	....
do bridges	10,523 01	....	10,523 01
Carillon and Grenville Canals	....	17,658 75	17,658 75
do do	7,288 05	....	7,288 05
Total	17,811 06	48,829 42	66,640 48

Department of Public Works,
July, 1867.

J. BAINE,
Book-keeper.

STATEMENT No. 6.

Detailed Statement of the Expenditure incurred, in the Repairs and Management of the Provincial Light Houses, under the charge of this Department, for the year ending 30th June, 1867.

Name of Light.	Name of Keeper.	Amount of Salary paid.	Supplies and Repairs.	Total.
		$ cts.	$ cts.	$ cts.
Lachine Pier Light Ship No. 1	John Norton	385 00	104 00	489 00
Do No. 2	Olivier Madore	250 00	124 60	374 60
Do No. 3	Benjamin Picard	250 00	237 00	487 00
Beauharnois	Joseph Meloche	225 00	86 18	311 18
Grosse Pointe	Peter Shannon	217 50	281 28	891 28
	Wm. Shannon	305 00		
	George Shannon, Assistant	87 50		
Mackie's Point	A. McDonald	175 00	195 56	370 56
Cherry Island	E. S. Johnson	435 00	143 90	578 90
Do Light Ship	G. H. Johnson	250 00	414 35	664 35
Lancaster Pier	Thomas Hill	335 00	244 72	579 72
Cole Shoal	Richard Elliott	250 00	252 72	502 72
Grenadier Island	Albert Root	250 00	131 24	381 24
Lindoe Island	J. Wallace	250 00	217 75	467 75
Gananoqui Narrows Jack Straw Shoals	James McDonald	330 00	304 48	634 48
Spectacle Shoal Red Horse Rock	John Buck	560 00	89 67	649 67
Burnt Island	Joseph Mervin	250 00	231 23	481 23
Wolfe Island	Robert Gillespie	250 00	216 48	466 48
Snake Island	L. Herchmer	435 00	545 06	980 06
Nine Mile Point	John Dunlop	435 00	278 84	713 84
False Ducks	Frederick Swetman	435 00	505 91	940 91
Point Peter	W. A. Palin	435 00	327 86	762 86
Scotch Bonnet	Henry Vandusen	435 00	503 01	938 01
Presqu'Ile	Wm. Swetman, Senr	325 00	242 70	567 70
Do Range Lights	James Cummins	250 00	130 20	380 20
Gull Island	George Roddick	435 00	465 67	1,075 67
	Robert Roddick, Assistant	175 00		
Gibraltar Point	George Durnan	435 00	260 48	695 48
Burlington Bay	George Thomson	300 00	111 26	411 26
Port Dalhousie	Jonathan Woodall	400 00	404 09	804 09
Port Colborne	David Fortier	400 00	543 28	943 28
Mohawk Island	John Burgess	435 00	272 92	707 92
Port Maitland	Peter Baikie	435 00	125 34	560 34
Port Dover	Henry Morgan	260 00	139 61	399 61
Long Point	H. H. Clarke	435 00	257 45	692 45
Port Burwell	Alexander Sutherland	320 00	151 36	471 36
Port Stanley	Richard Ead	144 00	81 49	225 49
Pointe Pelée	P. McIntyre	435 00	581 66	1,341 66
	James Edwards, Assistant	325 00		
Pelée Island	Wm. Jerome Swetman	435 00	263 95	698 95
Bois Blanc	Andrew Hackett	435 00	394 76	829 76
River Thames	Thomas Cartier	435 00	342 23	777 23
Goderich	Humphrey Fidler	325 00	99 22	424 22
Point Clarke	John Young	435 00	402 84	837 84
Chantry Island	D. McG. Lambert	435 00	491 81	1,145 56
	Wm. McG. Lambert	131 25		
	Rowland A. Lambert, Asst.	87 50		
Isle of Coves	D. McBeath	217 50	501 73	869 23
	Wm. McBeath, Assistant	150 00		
Griffith Island	Vesey C. Hill	435 00	371 73	806 73
Nottawasaga Island	George Collins	435 00	773 16	1,383 16
	C. Collins, Assistant	175 00		
Christian Island	Wm. Hoare	435 00	170 94	605 94
	Carried forward	17,305 25	13,015 72	30,320 97

STATEMENT No. 6—*Continued.*

Name of Light.	Name of Keeper.	Amount of Salary paid.	Supplies and Repairs.	Total.
		$ cts.	$ cts.	$ cts.
	Brought forward........	17,305 25	13,015 72	30,320 97
Pointe Claire, No. 1......	Arsène Glode...................	250 00	73 71	323 71
Do No. 2......................	Moïse Leclerc.....	240 00	112 45	352 45
Green Shoal.........................	Alfred Laberge..	250 00	47 06	297 06
Pleasant Bay....................................	....	....	552 75	552 75
Oakville	....	....	498 24	498 24
		18,045 25	14,299 93	32,345 18

Management, salary and travelling expenses of Superintendent, freight and charter of steamer delivering supplies, advertising, &c................	6,590 73
Placing buoys and light ships............................	459 04
Supplies on hand in store	708 36
Total.......................................	$40,103 31

DEPARTMENT OF PUBLIC WORKS,
July, 1867.

J. BAINE,
Book-keeper.

STATEMENT No. 7.

ABSTRACT STATEMENT shewing the total amount expended, under the Department of Public Works, during the year ending 30th June, 1867, as detailed in the foregoing Statements numbered 1, 2, 3, 4, 5 and 6.

STATEMENT.	Repairs and Management.	Construction.	Miscellaneous.	Total.
	$ cts.	$ cts.	$ cts.	$ cts.
No. 1......................................	186,377 06	36,828 28	....	223,205 34
2......................................	4,834 26	....	....	4,834 26
3......................................	41,848 94	564,566 96	....	606,415 90
4......................................	....	....	80,641 50	80,641 50
5......................................	48,829 42	17,811 06	....	66,640 48
6......................................	40,103 31	....	....	40,103 31
Total................................	321,992 99	619,206 30	80,641 50	1,021,840 79

DEPARTMENT OF PUBLIC WORKS,
July, 1867.

J. BAINE,
Book-keeper.

APPENDIX No. 2.

ST. LAWRENCE NAVIGATION—TABLE OF DISTANCES.

FROM STRAITS OF BELLE-ILE TO FOND DU LAC, AT HEAD OF LAKE SUPERIOR.

From	To	Sections of Navigation.	STATUTE MILES.	
			Inter-mediate.	Total to Straits of Belle-Ile.
Straits of Belle-Ile	Quebec	River & Gulf of St. Lawrence	826	826
Quebec	Three Rivers	Riv. St. Lawr'e to Tide-water.	74	900
Three Rivers	Montreal	do do	86	986
Montreal	Lachine	Lachine Canal	8½	994½
Lachine	Beauharnois	Lake St. Louis	15¼	1,009¾
Beauharnois	Ste. Cécile	Beauharnois Canal	11¼	1,021
Ste. Cécile	Cornwall	Lake St. Francis	32¾	1,053¾
Cornwall	Dickinson's Landing	Cornwall Canal	11½	1,065¼
Dickinson's Landing	Farran's Point	River St. Lawrence	5	1,070¼
Farran's Point	Upper end of Croyle's Island	Farran's Point Canal	¾	1,071
Upper end of Croyle's Island	Williamsburgh or Morrisb'gh	River St. Lawrence	10½	1,081½
Williamsburgh	Rapide Plat	Rapide Plat Canal	4	1,085½
Rapide Plat	Point Iroquois Village	River St. Lawrence	4½	1,090
Point Iroquois Village	Upper end Presqu'Ile	Point Iroquois Canal	3	1,093
Presqu'Ile	Point Cardinal, Edwardsb'h.	Junction Canal	2⅝	1,095⅝
Point Cardinal	Head of Galops Rapids	Galops Canal	2	1,097⅝
Galops Rapids	Prescott	River St. Lawrence	7⅜	1,105
Prescott	Kingston	do	59	1,164
Kingston	Port Dalhousie	Lake Ontario	170	1,334
Port Dalhousie	Port Colborne	Welland Canal	27	1,361
Port Colborne	Amherstburgh	Lake Erie	232	1,593
Amherstburgh	Windsor	Detroit River	18	1,611
Windsor	Foot of St. Mary's Island	Lake Ste. Claire	25	1,636
Lake Ste. Claire	Sarnia	Ste. Claire River	33	1,669
Sarnia	Foot of St. Joseph's Island	Lake Huron	270	1,939
Foot of St. Joseph's Island	do Sault Ste. Marie	St. Mary's River	47	1,986
Sault Ste. Marie	Head of do	Sault Ste. Marie Canal	1	1,987
Head of Sault Ste. Marie	Pointe aux Pins	St. Mary's River	7	1,994
Pointe aux Pins	Fond du Lac	Lake Superior	390	2,384

Out of the 2,384 miles, from the Straits of Belle-Ile to the Head of Lake Superior, 71¾ miles are artificial navigation, and 2,312¼ open navigation.

Straits of Belle-Ile to Liverpool, 1,942 geographical, or 2,234 statute miles.

The total ascent from Tide-water to Lake Superior is about 600 feet.

QUEBEC TO LIVERPOOL, *viâ* STRAITS OF BELLE-ILE, AND MALIN HEAD, NORTH OF IRELAND.

From	To	Sections of Navigation.	Geographical miles.	Statute miles.
Quebec	Saguenay	River St. Lawrence	106	122
Saguenay	Father Point	do	53	61
Father Point	Light-house, west end Anticosti.	do	176	202
West end of Anticosti	Cape Whittle, Labrador Coast.	Gulf of St. Lawrence.	175	201
Cape Whittle	Belle-Ile Light-house, east entrance of Straits	do	209	240
Belle-Ile	Malin Head, North of Ireland.	Atlantic Ocean	1,750	2,013
Malin Head	Liverpool	do and Irish Sea	192	221
Total from Quebec to Liverpool, *viâ* Belle-Ile, and Malin Head, North of Ireland.			2,661	3,060

HEAD OF LAKE SUPERIOR TO LIVERPOOL, *viâ* STRAITS OF BELLE-ILE AND NORTH OF IRELAND.

Sections of Navigation.	Geographical miles.	Statute miles.
Head of Lake Superior, at Fond du Lac, to Quebec	1,355	1,558
Quebec to Liverpool, *viâ* Straits of Belle-Ile and North of Ireland	2,661	3,060
Total from Head of Lake Superior to Liverpool, *viâ* Belle-Ile, and Malin Head, North of Ireland	4,016	4,618
N.B.—Route *viâ* Straits of Belle-Ile shorter than *viâ* Cape Race	158	182

Straits of Belle-Ile, 80 miles long by 14 average breadth.

QUEBEC TO LIVERPOOL, *viâ* CAPE RACE AND MALIN HEAD, NORTH OF IRELAND.

From	To	Sections of Navigation.	Geographical miles.	Statute miles.
Quebec	Saguenay	River St. Lawrence	106	122
Saguenay	Father Point	do	53	61
Father Point	Métis Point	do	22	25
Métis	Cape Ste. Anne des Monts	do	71	82
Cape Ste. Anne des Monts	Cap de la Madeleine	do	46	53
Cap de la Madeleine	Fame Point	do	29	33
Fame Point	Cap des Rosiers	do	25	29
Cap des Rosiers	Cap St. Pierre de Miquelon	Gulf of St. Lawrence.	343	394
Cap St. Pierre de Miquelon.	Cape Race	Atlantic Ocean	132	152
Cape Race	Malin Head	do do	1,800	2,070
Malin Head	Liverpool	do and Irish Sea	192	221
Total from Quebec to Liverpool, *viâ* Cape Race and Malin Head, North of Ireland			2,819	3,242

HEAD OF LAKE SUPERIOR TO LIVERPOOL, *viâ* CAPE RACE AND NORTH OF IRELAND.

Sections of Navigation.	Geographical miles.	Statute miles.
Head of Lake Superior, at Fond du Lac, to Quebec	1,355	1,558
Quebec to Liverpool, *viâ* Cape Race and North of Ireland	2,819	3,242
Total from Head of Lake Superior to Liverpool, *viâ* Cape Race, and Malin Head, North of Ireland	4,174	4,800
N.B.—Route *viâ* Cape Race longer than *viâ* Straits of Belle-Ile	158	182

LAKE NAVIGATION.

Names of Lakes, and of Rivers connecting the same.	Statute Miles.			Depth in Feet.		Area. Square Miles.	Elevation above Sea, at Three Rivers.
	Greatest Length.	Greatest Breadth.	Average Breadth.	Greatest.	Mean.		
							Feet.
Superior	390	160	80	....	900	32,000	600
St. Mary's River	55	4	1	60	30	....	582
Michigan	345	84	58	....	1,000	22,400	580
Green Bay.	100	25	18	....	500	2,000	580
Mackinaw Straits..............................	50 Not added below.....	20	10	200	40	....	580
Georgian Bay..................................	130	55	40	....	500	....	578
Huron..	270	105	70	900	450	23,000	578
St. Clair River	33	....	....	50	35	....	....
St. Clair Lake...................................	25	25	20	27	15	360	572
River Detroit	25	3	1	37	20	....	....
Lake Erie...	250	60	38	204	90	10,000	564
Niagara River..................................	35	3	1	....	30	....	....
Lake Ontario....................................	190	52	40	600	412	6,700	234
Lake St. Francis...............................	33	5	4	80	36	132	141
Lake St. Louis	15	7	5	68	30	75	58
Lake St. Peter	30	9	7	40	8	200	0
River St. Lawrence, connecting Lakes between Kingston and Three Rivers	186	....	....	....	20	....	....
Total length of Lake Navigation.	2112	Inclusive of River portions.........				96,867	....
Do ...	1778	Exclusive of River portions.........				....	....

APPENDIX No. 3.

(No. 707.)

REPORT BY J. G. SIPPELL, RESIDENT ENGINEER.

DESCRIPTION OF THE WORKS ON THE LACHINE, BEAUHARNOIS, CHAMBLY, ST. OURS, STE. ANNE, CARILLON, CHUTE A BLONDEAU, AND GRENVILLE CANALS.

Lachine Canal Office,
Montreal, 31st August, 1867.

F. Braun, Esquire,
Secretary Public Works, Ottawa.

Sir,—I beg herewith to submit the following Report on the Canals under my charge, giving, as far as practicable, a description of the various structures, their positions, dimensions, and present state of repair, as called for by your letter of the 15th day of June, 1867:—

LACHINE CANAL.

The Lachine Canal is the first artificial channel on the line of the Upper St. Lawrence navigation, and extends from the Harbor of Montreal to the Village of Lachine, at the eastern extremity of Lake St. Louis, a distance of eight and a half miles, and was built to overcome the descent in the River St. Lawrence at the Sault St. Louis or Lachine Rapids.

The excavations are principally through earth, with a cutting of about a mile in length through a limestone formation extending downward from the Guard Lock at Lachine.

The banks are formed of the material excavated from the prism of the Canal, and throughout their whole extent are protected on the inside slopes with a dry rubble wall. They are in good condition.

The prism of the Canal is 80 feet wide on bottom, 120 feet at line of surface water, and 10 feet deep, giving a sectional area of 1,000 feet, with a draft of 9 feet on the sills of the locks.

Through the "rock cut" below Lachine, the Canal is 100 feet wide on bottom at the narrowest places, the sides of the cutting being nearly vertical.

The towing-path is formed on the south bank between Wellington Bridge and Côte St. Paul, and on the north bank from Côte St. Paul to Lachine.

The principal Basins and Docks are situated between Lock No. 1 and Wellington Bridge, and afford accommodation for a large number of vessels. Notwithstanding their extent, they are complained of as insufficient for the requirements of the trade.

There are five locks on this Canal, overcoming a total ascent of 44 feet 9 inches. They are built of dressed stone masonry, laid in hydraulic mortar, and rest on a timber and plank foundation. The chambers of the locks are 200 feet in length, and were originally built 45 feet in width, between piers, but they have since been forced inward by the frost, and now vary in width from 44 feet 2 inches to 44 feet 11 inches. The lock gates are constructed of solid oak and pine timber. The top and two bottom bars are of oak. The timbers are held together with large iron bolts, passing through the entire height of the gates, and otherwise strengthened with oak binders, secured with nut and screw bolts, and are worked by chains attached near the toe of the second bar from the bottom, passing through well holes in the walls, and connecting with iron crabs fastened to the coping stone. There are two crabs for opening and two for closing each pair of gates. Four valve gates, of cast iron, each 4 feet by 2 feet, for admitting water, are placed between the two bottom bars of the gates, and worked by lifting screws from a platform at the top.

Two bumping posts, of oak timber, are placed on the face of the wall at the piers above and below the upper gates, on each side, at all the locks.

Lock No. 1 is situated at the north-east end of Basin No. 1, and forms the lower entrance to the Canal, opening directly into the Montreal Harbour. A pier, constructed of crib work, filled with stone, extends from the wing wall, on the south side, 249 feet downward, for mooring vessels waiting to enter the lock. Seventy-two feet of the lower end have been raised by the Harbour Commissioners, to correspond with the height of their new wharf opposite the lock, and south side of Basin No. 1. The bank, on the south side of the lock, is protected with a paving of stone 30 feet in width and 244 feet in length, diminishing to a width of 17 feet, on the bank south side of the Basin.

The lock is 44 feet 9 inches wide, between piers; the height of the chamber walls 32 feet 3 inches, and the lift 13 feet. The masonry and lock gates are in good condition.

The lock is lighted, at night, by two gas lamps, on the north side, and by two kerosene oil burners, on the south side.

Lock No. 2 is 580 feet above Lock No. 1, and forms the connection between Basins Nos. 1 and 2, and is situated on the north side of the combined locks at the lower entrance of the old Canal, at Windmill Point, on which the building used for the Canal offices is situated, as well as the remains of an old windmill, now used as a dead house. The embankments on the south side of the lock, and on each side of the old Canal, are supported by retaining walls of dressed masonry, laid in hydraulic mortar, reaching from the several levels of the coping of the old locks, to the level of the walls of Lock No. 2. The first swing bridge on the Canal is placed across the upper entrance to this lock, and connects with a permanent bridge over the old locks. On the south side of the upper old lock stands a stone building, 42×32 feet, formerly used as a house and office by the Collector of Canal Tolls, and now occupied by the Masters of Locks Nos. 1 and 2, and the keeper of the swing bridge.

The new retaining walls, opposite the lock chamber, form the abutments for a timber bridge, 35×14 feet, across the old lock, where the embankment, at Lock No. 2, slopes and forms a roadway, 185 feet in length, to the level of the Basin No. 1. This roadway is supported, on the south side, by the new retaining wall, which is built to conform to the level of its surface; and on the north side, the slope of the embankment is sustained by a paving of stone.

The lower wing walls of the lock terminate, on each side, in a flight of stone steps, descending from the level of the embankment to the coping of the walls of Basin No. 1.

The width of the lock, between piers, is 44 feet 11 inches; the height of the chamber walls 32 feet 3 inches, and the lift 13 feet.

Locks Nos. 1 and 2 are built to admit vessels of 16 feet draft of water, but a temporary breast work of timber, placed above the upper recess of Lock No. 2, practically reduces the depth to nine feet, the present standard on the St. Lawrence Canals.

The lock walls, gates, and fixtures are in good order.

The lock is lighted, at night, in the same manner as Lock No. 1.

Lock No. 3, or St. Gabriel Lock, is situated near the western limits of the city, 5,200 feet from Lock No. 2, and on the south side of the site of the old Canal Locks, with a swing bridge across its upper entrance. A large number of factories and machine shops are in operation on each side of the lock, driven by water supplied from the Canal; the channel of the old canal forming the head-race for supplying those on the north side.

The neck of land lying between the old and new Canals extends westward 900 feet from the lock, and is at present occupied by a saw mill and lumber yard, owned by J. W. McGauvran & Co. The tail-race from the saw mill passes through the eastern portion of this strip of ground, and between the old and enlarged locks, discharging into the Canal below.

The width of the lock, between piers, is 44 feet 4 inches; the height of the chamber walls 20 feet 7 inches, and the lift 8 feet 9 inches.

The walls of this lock, above surface water, in the lower reach, are verv much shaken, and leak badly. The gates are in good condition.

The lock is lighted with two kerosene oil lamps at each end.

On the south side of the Canal, the bank below the lock, for a distance of 212 feet, is protected with a retaining wall of rubble masonry, laid in mortar and coped with timber. At a distance of 150 feet further down, opposite Mr. Redpath's Sugar Refinery, the bank is supported with a timber docking and wharf, 400 feet in length by 20 feet in width. The superstructure of the docking and wharf have been renewed this season.

The north bank, below the lock, is supported by a docking of old timber for a distance of three hundred and sixty-five feet.

Lock No. 4, or Côte St. Paul Lock, is situated 9,400 feet above Lock No. 3, directly opposite, and on the north side of the old Canal locks, which now form the tail-race to a regulating weir, recently built; the south wall and bank having been removed to afford the space necessary for its construction. A pier, partly built on detached cribs, with a continuous superstructure, extends 239 feet above the south upper wing wall. The entrance to the head-race for supplying water to the mills and factories at this lock, is formed in the bank above the regulating wier, on the south side of this pier, and is traversed by a timber bridge, 79 feet long by 16 feet wide, with head gates for regulating the flow of water, working against the posts which support the upper side. A timber bridge, 40 × 13 feet, is also placed across the lower end of the tail-race. There are two flouring mills, an elevator, and six manufactories of edge tools, shovels, &c., in operation on the south side of the lock, driven by water from the Canal.

The walls of this lock, above surface water, in the lower reach, are also in bad order. The width, between piers, is 44 feet 2 inches; the height of the chamber walls 21 feet, and the lift 9 feet.

The lock is lighted with kerosene oil, in the same manner as Lock No. 3.

Lock No. 5, or Guard Lock, is situated at Lachine, the old Canal locks being on the north side, a weir for supplying water to the Canal on the south, and a swing bridge across its upper entrance. There are two timber piers, below the lock, for the accommodation of vessels either entering or leaving. The pier on the north side is 83 feet long by 11 feet 6 inches in width at surface, in good condition; and that on the south side is 100 feet long by 11 feet 6 inches in width. The superstructure is in bad order. The tail-race from the supply weir discharges into the Canal a short distance below this pier, and the head-race opens from the channel at the upper wing wall of the south abutment for the swing bridge. A large triangular boom, constructed of timber, 150 feet long and 33 feet wide at the base, which rests against the wing wall, extends across the entrance to the head-race, and for some distance above it. A permanent timber bridge is placed over the upper entrance, and leads directly from the main road to the long pier or wing dam above the lock. Another bridge is placed across the head-race, in line of main road, through the Village of Lachine, and a permanent bridge over the old Canal lock. The sides of the road, from the swing bridge to the toll gate, a distance of 150 feet, are protected with a guard railing, 4 feet in height. A guard railing, of a total length of 600 feet, is also built on both sides of the head-race, above the weir. A breast work of timber, fitted with sluice gates is placed at the upper entrance of the old Canal locks, and forms a weir for the admission of water to the Canal. A tow-path bridge is placed across the old Canal, at the lower entrance of the lock. The Lockmaster's house is situated between the upper entrance of the old and enlarged Canals, built of undressed stone, 27 × 20 feet, one story high. For a distance of 450 feet above the lock, the north bank is protected with a rubble wall of large stones. From this point, the booms for enclosing the south side of the timber basin, extend to the upper entrance of the old Canal.

This lock is built on a rock foundation. The walls, gates, and fixtures for working them are all in good order. The width, between piers, is 44 feet 4 inches, and the height of the chamber walls 18 feet 6 inches.

The lock is lighted with kerosene oil, in the same manner as Locks Nos. 3 and 4.

BASINS, WITH DOCKING OF DRESSED MASONRY.

There are four basins of this description, situated at Montreal, viz.:

Basin No. 1 is situated between Locks Nos. 1 and 2, and occupies the entire space between them. The walls are built of dressed limestone, laid in hydraulic mortar, and are at present in good condition. The basin is 580 feet long by 180 feet wide, giving a superficial area of 104,400 feet. The south wall is 19 feet high, and the north wall 22 feet. There is a planked wharf behind and on a level with the coping on three sides of the basin: at the eastern end it is 30 feet wide, on the north side, 61 feet wide at the lower and 26 feet at the upper end, and 24 feet 6 inches wide at the west end, affording a wharfage accommodation of 30,150 superficial feet. In rear of the wharf, north side of basin, is a revetment wall of dressed stone, 5 feet high, along the line of Common Street, the surface of which is 5 feet above the level of the wharf. The bank on the south side is 90 feet in width, and slopes from the coping of the dock wall to the line and level of the old timber docking at the entrance to the old Canal locks.

This basin is occupied by the larger class of passenger steamers engaged on the route between Montreal and the ports of the Province of Ontario, and by the vessels of the Ottawa and Rideau Forwarding Company.

Basin No. 2 commences at the upper entrance to Lock No. 2, and extends to the Wellington Bridge, a distance of 2,200 feet, on the centre line of the basin. The walls are 13 feet 6 inches high, and of the same description of masonry as Basin No. 1. The total length of stone docking on the north side is 1,860 feet, and on the south side 1,600 feet. The bank on the south side, from Wellington Bridge to the point opposite Mr. Gould's mill, is supported with a rough timber and pile docking. Along the lower portion of this bank the Grand Trunk Railway Company have laid a temporary track, where they bring their cars alongside of vessels for freighting purposes. A planked wharf is laid on the north side, from the level of the dock coping to the line of Common Street, 36 feet wide, extending along the north wall 1,000 feet, and giving a total area of 36,000 superficial feet. The triangular space formed by the south side of Basin No. 3 and the upper part of the north side of this basin, is also planked and occupied by three flour sheds. The business of the principal forwarding firms on the Canal is done on the north side of this basin, where the wharf is furnished with five hoisting cranes and five weighing scales, distributed in the following order: the first between Prince and Duke Streets, the second opposite Duke Street, the third between Nazareth and Dalhousie Streets, the fourth opposite Dalhousie Street, and the fifth opposite Jacques & Tracy's storehouse, at the corner of Common Street.

The south side of the basin is leased and occupied altogether by flour manufactories, grain elevators, iron works, &c., a space of ten feet from the inside line of the dock wall to the face of the buildings being reserved for Canal purposes.

At a distance of 1,010 feet from the lower end, at Lock No. 2, this basin is divided by a point of land; the southern portion in front of the mills is 100 feet wide, and extends to Messrs. Tate's Dry Dock, about 500 feet; the northern portion turns in a westerly direction, at an angle of 40 degrees, and extends, on a uniform width of 240 feet, to the Wellington Bridge, a distance of about 1,100 feet; the width of the basin above the swing bridge at Lock No. 2 is 100 feet, above the entrance to the old locks 220 feet, and at the angle above-mentioned 280 feet; the bank from the point to Wellington Bridge is 900 feet, and from the point to the entrance to Tate's Dock forms a slope of about two to one, and is unprotected; the total superficial area of the basin being nearly 14½ acres.

Basins Nos. 3 and 4 are slips extending in a northerly direction from the upper end of Basin No. 2, parallel to each other, and 130 feet apart. The east side of Basin No. 3 is 240 feet in length, and the west side 350 feet. The east side of Basin No. 4 is 360 feet long, and the west side 560 feet, each basin having a uniform width of 110 feet. The north wall of Basin No. 2 is continued round these slips, and forms a line of docking from Lock No. 2 to the Wellington Bridge, a distance of 3,590 lineal feet. The superficial area of Basin No. 3 is 32,450 feet, and of Basin No. 4—50,600 feet.

The tongue of ground between these basins is occupied by two large flour sheds, and a wharf 24 feet in width laid at the head of each basin. The wharf in front of the Hon. John Young's Warehouse, on the west side of Basin No. 4, is only 15 feet wide. Above these stores the ground between Wellington Street and the basin is owned by the Government, where the wharf is 25 feet wide.

These basins, wharves and flour sheds, between Lock No. 1 and Wellington Bridge, are lighted at night with gas supplied by the Montreal New City Gas Company.

There are also two basins with ordinary Canal banks protected with stone slope walling: the first on the north side of the Canal, 100 feet above Wellington Bridge, and known as the "Wood Basin" from its affording accommodation to vessels engaged in the firewood trade. This basin is 210 feet long on the east side, 300 feet on the west side, and 100 feet wide, giving a superficial area of 25,500 feet. It is altogether insufficient for the requirements of the trade to which it is appropriated.

The second basin is situated on the same side of the Canal, 700 feet above the first, and is known as the St. Gabriel Basin. It is 430 feet long, and of the same width, with an island 300 feet long by 200 feet wide in its centre, which reduces the superficial are to 124,900 feet. This basin is used for discharging timber and lumber admitted into the Canal in rafts, for the Montreal market.

About 15 or 16 years ago it was intended to enlarge this basin on the north side, and an excavation for that object, 400 feet in length and of the width of the basin, was partially effected. The work was, however, suspended, and it still remains in an unfinished condition.

There is a basin on the south side of the Canal, below St. Gabriel Lock, known as the "Priest's Basin," owned by private individuals, over the entrance to which, and on the line of the towing-path, a swing bridge was constructed in 1866 at the expense of the proprietors. This bridge is built on the same plan as the swing bridges in use on the Canal, but smaller, its length being 71 feet, and its inside width, between standards, 8 feet 8 inches.

There is another private basin on the north side of the Canal above Bridge No. 4, on the property owned by the late Benjamin Brewster.

SWING BRIDGES.

There are seven swing bridges on the line of the Canal; six of them are built of timber, with dressed stone abutments, which belong properly to the Canal, and one of iron, constructed by the Grand Trunk Railway Company.

The timber bridges are formed of string pieces, braced horizontally with timber and iron cross braces, the side of the bridge forming a vertical truss, composed of diagonal cross braces of timber, placed between the stringers and top rail, held in their places by iron tie bolts, with nut and screw at each end. A ballast box is formed at the heel of the bridge to counterbalance the weight of the toe. There is a gallows frame erected at the pivot beam, over which the suspension chains pass, for supporting the toe of the bridge, when open. The length of these chains is graduated by means of screw buckles. There are two rollers attached to the heel of the bridge, traversing on an outer segment of cast iron, secured to a stone foundation. Rollers are also placed near the centre of the bridge, traversing on an inner segment, secured to the stone pier, for supporting the pivot. On the smaller bridges this pivot is placed in the centre of the pivot beam, and 8 feet 8 inches from the face of the abutment wall; but, on the two larger bridges, at Montreal, they are placed at the side, about two feet from the face of the wall, and secured to the under surface of the corbel below the stringer. The small bridges are opened and shut by means of locomotive power, worked by hand, attached to the outside of the bridge at the heel. The two large bridges, at Montreal, are worked, one by horse, and the other by water power.

All the bridges are painted white, and situated on the Canal in the following order:—

Bridge No. 1, or Montreal Bridge, is placed over the upper entrance to Lock No. 2, 71 feet above the quoins, and leads from the line of Mill Street, on the south side of the Canal, to Common Street, on the north side. The bridge abutments are formed by the extension of the lock walls. A semicircular wall, of dressed masonry, turned on a radius from the pivot, is built to protect the heel of the bridge, with an offset of one foot on the inside, which carries the segment traversed by the heel rollers. The approach, at the northern end of the bridge, is supported by wing walls, of dressed masonry, curving outward, with one end of the wall terminating in a circular, and the other in an octagonal stone pillar. The bridge is worked by a small horizontal water wheel, driven by water from the Canal, and discharging into the old lock.

This bridge is 81 feet 4 inches in length, 15 feet 4 inches wide, between standards, 18 feet 6 inches from the under surface of the cap to the roadway beneath, and is in good condition.

Bridge No. 2, or Wellington Bridge, is placed over the Canal on the line of Wellington Street, and consists of two parts, one moveable and the other permanent, resting on abutments of dressed stone masonry, and an elliptical stone pier, in the centre of the Canal, its longest diameter running parallel with the channel, which supports the toe of the swing bridge, when closed, and the south end of the permanent bridge, the other end being supported by the north abutment. The pier is protected, at each end, with cribs filled with stone. The heel of the swing bridge is protected with a circular wall, and the approaches supported with circular wing walls and pillars, in the same manner as

Bridge No. 1. Two octagonal stone pillars, one on each side of the bridge, are also placed on the centre piers.

The swing bridge is worked by horse power; its length is 86 feet, outside width 18 feet, width between standards 15 feet, and 18 feet 6 inches from under side of cap to surface of roadway.

The permanent bridge is 60 feet long, and its inside width 17 feet. Both bridges are in good condition.

Bridges Nos. 1 and 2 are lighted by gas throughout the year.

Bridge No. 3, or St. Gabriel Bridge, is placed over the entrance to Lock No. 3, 52 feet above the quoins of the upper gates, and on the line of Seigneurs Street, in the western part of the city. This bridge is quite new, having been built in the spring of 1866, and is of the smaller description of swing bridges.

The abutments are built of dressed masonry, corresponding with that of the lock, with wing walls rounded off on a radius of 24 feet. The heel of the bridge is protected with a circular wall, of dressed stone, which is afterwards continued in a direct line until it connects with the outer end of the offset wall for supporting the toe of the bridge, when open.

This bridge is 80 feet 4 inches long, 11 feet 6 inches wide, between standards, 13 feet 6 inches in height, from underside of cap to surface of roadway, and swings to the north side of the Canal. At night it is lighted with kerosene oil.

Bridge No. 4, or Brewster's Bridge, is placed over the Canal at Brewster's Road, 2,400 feet above Bridge No. 3, and consists of a moveable and a permanent part. The abutments are built of dressed limestone, with an elliptical stone pier in the centre, 40 feet in length, parallel with the line of the Canal, for supporting the interior ends of both bridges, and is protected with crib work, averaging 44 feet in length by 17 feet in width, in the same manner as at the Wellington Bridge. The north abutment, on which the bridge works, is 162 feet in length, including the wing walls, which are rounded off on a radius of 24 feet. The abutment on the south side, which supports one end of the permanent portion, is 100 feet in length, with wing walls, of 24 feet radius.

The swing bridge is 79 feet 9 inches long, 11 feet 7 inches wide, between standards, and 13 feet 3 inches high, from the surface of the roadway to the underside of the cap. The permanent bridge is 51 feet long, and 17 feet 5 inches wide, on the inside.

The approach, at each end of the bridge, is supported by wing walls, 10 feet in length, curving outward, each end terminating in an octagonal stone pillar, 5 feet 4 inches high, and 11 feet 9 inches in circumference. Two pillars, of the same description, are also placed on the centre pier.

The bridge and abutments are in good order.

At a distance of 1,900 feet above this bridge, the Grand Trunk Railway crosses the Canal by means of a swing bridge, working on a pier in the centre of the channel, built of masonry and crib work of timber, ballasted with stone, of a total length of 150 feet by 22 feet wide. The bridge is built with side trusses and girders of wrought plate iron, carrying iron cross girders, on which the track rails are laid. Each end of the bridge is supported by strong iron suspension rods, attached by a hinge joint to the top of iron pillars, standing at each side, and midway between the ends. The bridge is 123 feet 3 inches long, with an inside width of 13 feet 7 inches. The abutments are built of stone, with a docking of timber at each end; that on the north side is 147 feet in length, and on the south side 134 feet.

Bridge No. 5, or Côte St. Paul Bridge, is placed over the Canal 1,100 feet above Lock No. 4, on the line of road leading from the Village of the Tanneries to Côte St. Paul, and also consists of a moveable and a permanent bridge. The abutments, protection wall in rear of bridge, centre pier with crib work, wing walls and pillars at the approaches, and the permanent bridge, are similar to those at Bridge No. 4, the heel of the bridge being also on the north side of the Canal.

The swing bridge is 81 feet 5 inches long, 11 feet 5 inches wide, between standards, and 13 feet 7 inches from underside of cap to surface of roadway. The permanent bridge is 49 feet long, with an inside width of 17 feet 7 inches.

The bridge and all the structures connected with it are in good order.

Bridge No. 6 is placed over the upper entrance to the Guard Lock at Lachine, on the line of the main road through the village. The abutments are formed by the extension of the lock walls. The heel and approaches are protected with wing and circular walls, the same as at Bridges 4 and 5, but the pillars at the outer ends are circular, and 12 feet 6 inches in circumference.

The bridge swings to the north side of the Canal, and is 89 feet 6 inches long, 11 feet 7 inches, between standards, 13 feet 3 inches from underside of cap to top of roadway, and, together with the abutments, is in good order.

These four latter bridges are lighted with kerosene oil lamps.

The small permanent bridges will be described with the structures with which they are severally connected, and their dimensions given in an appended tabular form.

WEIRS.

There are four large weirs on this Canal, and two small ones, besides the weirs formed by the locks of the old Canal.

The first weir on the Canal, commencing at the upper end, is the supply weir and race around and on the south side of the Guard Lock. This weir is of the larger class, built of rock-faced masonry on a rock foundation, and consists of side and wing walls, breast wall and centre pier. There are eight openings in the breast wall, 6 feet high by 4 feet wide, fitted with sluice gates of oak, strapped and otherwise strengthened with iron, turning on a cast-iron step secured to a stone sill or offset from the bottom course of the breast wall, and fitting into oaken frames bolted to the face of the wall. A wrought-iron spindle passes vertically through the centre of the gate from the step, and extends to a platform placed across the weir, from which the gates are worked with a large wrench. The side walls and centre pier are checked above the breast wall to admit stop-logs for regulating the overfall in seasons of high water.

A head-race of 350 feet in length opens at the wing wall above the swing bridge. This race is 33 feet wide on bottom, 41 feet wide at top, and the sides faced with rubble wall. The tail-race is built in the same manner, and discharges into the Canal 280 feet below the weir.

The next weir in succession is a small waste weir, placed in the bank on the north side of the Canal, 700 feet above Lock No. 4. The weir consists of side and winged walls of dressed masonry, and a breast wall containing two openings, 3 feet square, fitted with oak sluice gates hoisted by means of a rack and pinion. The side walls are parallel, 12 feet long, and 12 feet apart at top, with wing walls diverging to a width of 17 feet 6 inches at the ends, from which a tail-race, 52 feet in length and 17 feet 6 inches wide, the sides of which are faced with a dry rubble wall, discharges into the little River St. Pierre.

There is a timber bridge, 12 feet in length, placed on the line of the towing path over the weir. All are in good condition.

The next is a large regulating weir, on the south side of Lock No. 4, at Côte St. Paul, and is built on a timber foundation, with side walls, breast wall and centre pier of rock-faced work. The upper face of the breast wall is hammer-dressed, and has eight sluices, 5×4 feet, constructed and arranged in the same manner as the weir at Lachine. This weir and race were built in 1862, on the site of the old Canal locks. The north side of the tail-race is formed by the old lock walls. The south wall was taken down and rebuilt further back to afford a larger water-way from the weir. About 100 feet from the weir downward, the side walls are sheeted with plank. A timber bridge, 40 feet long by 13 wide, is placed across the lower end of the race, and a guard railing, 246 feet in length by 4 feet high, placed along the south bank. This entire structure is in good condition.

The next is a small waste weir placed in the south bank of the canal, 100 feet above the iron bridge of the Grand Trunk Railway, the tail-race discharging into the little River St. Pierre, 300 feet from the weir.

This weir is built on the same plan as the small one above Lock No. 4. The masonry requires pointing, otherwise it is in good order.

The third is a large waste weir, situate at the upper end of the south dock wall of Basin No. 2, at Montreal, and consists of a breast wall of masonry placed in line with the dock wall, boncharded on its upper side and rock-faced in rear, with side walls and three centre piers of rock-faced work, built on a timber foundation. The piers are below the breast wall, and divide it into four portions, each having two openings fitted with sluice gates. The gates on the two central portions are hoisted by lifting screws, and those at each end by levers. The bottom of the tail-race is also planked for a length of 183 feet, and discharges into the River St. Lawrence, 600 feet from the weir. The sides of the race-way are supported with strong rubble walls, laid in hydraulic mortar, faced with timbers 3 feet in height.

At a distance of 140 feet from the weir, the tail-race is spanned on the line of Mill Street by a permanent timber bridge, 44 feet long by 34 feet wide, with a guard railing on each side. The ends of the bridge rest on abutments of rubble masonry, 17 feet in height from the bottom of the race-way. These structures are in good order.

The fourth large structure of this description is a waste weir, situated at the lower end of Basin No. 2, on the south side of the entrance to the old locks, built with side walls, and a breast wall of masonry placed on a line of the dock wall, with five openings fitted with sluice gates, hoisted by lifting screws operating in a frame work of timber placed over the breast wall. The tail-race, after passing under Mill Street, discharges into the River St. Lawrence, at a distance of 220 feet from the weir, and is constructed of timber bents planked inside and outside. The top is on a level with the adjoining ground, and covered with plank which requires repairs, but the weir and other portions of the structure are in good order.

A breast work of timber is placed at the upper entrance to the old Canal Lock, at Lachine, and another at the lower entrance of the old St. Gabriel Locks, at Montreal, both fitted with sluice gates; the former for supplying water to the Canal, and the latter for regulating the levels above and below Lock No. 3.

CULVERTS.

There are three culverts passing under the Canal, viz.:

The first is situate 1,500 feet above the Wellington Bridge, and consists of a rectangular tubing of timber for a water-way under the Canal, each end opening into a well built of dressed stone masonry, with a breast wall for supporting the Canal bank, and two wing walls placed at right angles to the breast wall. The walls above ground are 2 feet 6 inches in thickness, built of neatly dressed grey limestone. The upper surface of the wing walls slopes to a level six feet below the top of the breast wall, and covered with a stone coping projecting two inches over each side, the angles and ends of the wing walls being surmounted by ornamental stone caps. The stream of water which passes through this culvert flows under Canal Street, on the south side, and is crossed by a timber bridge, 33 feet long by 17 feet in width, with guard railing on each side, resting on abutments of rubble masonry laid in mortar. These structures are in good condition.

The second culvert is situated 3,500 feet below the lock at Côte St. Paul, and is built on the same plan as the first, but with a much larger water-way, through which the little River St. Pierre passes, and is in good order.

The third culvert, built on a similar plan and size as the first, is situated 2,000 feet above Côte St. Paul Lock. The masonry requires pointing, and one of the stone caps resetting.

PIERS, CRIBS, AND DOCKING OF TIMBER.

Most of the piers and cribs have already been referred to in the description of the structures with which they are connected, and their dimensions in detail, together with those for supporting the booms in the timber basin at Lachine, are given in a tabular statement in connection with other structures.

Besides the timber docking below Wellington Bridge and St. Gabriel Lock, there is another line of docking on the north side, below Brewster's Bridge. The first, 129 feet from the wing wall of the bridge downward, was rebuilt last spring (1867), while a length of 478 feet remains in a dilapidated condition.

LONG PIER, AT LACHINE.

This pier, or more correctly, wing dam, extends from the river bank, on the south side of the Guard Lock, to a point above the old railway terminus at Lachine, a total distance of 4,650 feet. The pier is built of cribs filled with stone, and the surface covered with longitudinal timbers, on which a superstructure faced with a rubble wall rests. This wall is built of large stones raised to a height of one foot above the line of high water, the whole being ballasted and well packed with stone, and the surface macadamized.

The sectional dimensions of the pier are as follows:—Width of crib work 30 feet, with perpendicular sides; width of stone superstructure 29 feet at bottom, battering to 21 feet at surface, and 7 feet in height.

This pier was built for the purpose of raising the water at the upper entrance of the Canal, and for the accommodation of vessels, and is supplied with mooring posts for their convenience.

A small light-house is placed on the upper end, the first in the range of inland light-houses above Montreal.

TIMBER BASIN AND BOOMS, AT LACHINE.

This basin lies between the south bank of the upper entrance to the old Canal and the channel of the new, marked by a line of guide cribs, to which the booms are attached. The total length of the basin is 3,366 feet; the greatest width 528 feet, and the narrowest 298 feet, the whole superficial area being about 28 acres.

This basin is set apart for timber and sawed lumber, in rafts, on which nominal dues are levied, when admitted within the booms.

The booms are constructed of pine timber, 4 feet 6 inches in width by 16 inches thick, and vary in length from 100 to 170 feet. The timbers are laid close, and firmly held together by oak dowels and wrought iron nut and screw bolts. They are connected at the ends by chains passing through iron brackets and round semicircular blocks of hardwood, well bolted to the upper side of the boom. The total length of the booms is 3,039 lineal feet.

BUILDINGS CONNECTED WITH CANAL.

1*st. Flour Sheds.*—There are five flour sheds on the Canal at Montreal, viz.:—

Sheds Nos. 1 and 2 are situated on the tongue of land between Basins Nos. 3 and 4, and are built of timber in a permanent manner, the roofs covered with sheet-iron and painted. Shed No. 1 is 402 feet long by 36 feet 4 inches wide. No. 2 is 337 feet long, and of the same width as No. 1, both sheds covering a superficial area of 26,850 feet.

Sheds Nos. 3, 4, and 5, are built of timber, in a strong and durable manner, and are situated on the angle formed by the north wall of Basin No. 2, and the east wall of Basin No. 3. The roofs are covered with inch boards well battened, and the sides and ends boarded and battened four feet below the eaves. They are floored with 3-inch plank. These three sheds have been built since 1861, and are in good condition. Shed No. 3 is 225 feet long by 34 feet 8 inches wide. No. 4 is 186 feet long, 36 feet wide; and No. 5 is 291 feet long by 32 feet wide, the total area covered by sheds being 50,688 feet.

These sheds are built for the protection of flour and other products, after being discharged from vessels navigating the Canals.

2*nd. Lock and Bridge Masters' Dwellings and Collector's Office.*—There are three old stone buildings on this Canal, which serve as lockmasters' dwellings, viz.:—One on the south side of the old Canal Locks, at Montreal; one on the north side of the old St. Gabriel Locks, and the third between the upper entrance to the old lock and new Canal, at Lachine.

There is also a good stone building, roofed with tin, on Windmill Point, south side of Lock No. 2, known as the Lachine Canal Office, and occupied for that purpose by the Collector, Superintendent and Engineer.

3*rd. Storehouses and Workshops.*—The old frame building, 94×36 feet, situate on the piece of ground between Wellington Street and Basin No. 4, recently purchased from Mrs. Young, is used as a store house for the Canals and Light Houses. An old frame building, situated on the Government land, at Point St. Charles, near the old farm house, now occupied by the keeper of Wellington Bridge, is also used for storing Canal property. A wooden shed, occupied as a workshop, is situated on the Government property, south side of the Canal, opposite Wellington Bridge.

4*th. Watch Houses.*—There is a frame building, 12 feet square, roofed with pine shingles, placed on each lock, for the accommodation of the employés, and a small watch house for the keepers of Brewster's and Côte St. Paul Bridges.

OLD LACHINE CANAL.

The existing portions of the old Canal may be described :—1st. The three old combined locks, at Montreal. The upper one, which has been supplied with new gates, is used as a graving dock. The other two have been abandoned. The masonry, in the walls of these locks, is very much out of repair. 2nd. The remains of the old locks, at St. Gabriel, used as a regulating weir, and a portion of the old Canal above, which serves as a head-race to the mills and factories on the north side of the Canal. Below Mr. Cantin's Dry Dock, four stone piers are built, on a timber foundation, at the upper entrance to this race. These piers are checked, on the sides, to allow the insertion of stop logs, should they be required, to shut off or regulate the flow of water to the mills. 3rd. The north walls of the old locks, at Côte St. Paul, now forming one side of the tail-race, below the regulating weir; and 4th. The old lock, at Lachine, converted into a supply weir, with a portion of the old Canal, extending upward 3,500 feet from the lock. This portion of the old Canal runs parallel with the main road, through the village, and the exposed portion guarded by a railing, built in panels, 12 feet long and 4 feet high, the total length of which is 2,707 feet, and maintained by the Department. Opposite the old Hudson Bay Store, the old Canal is crossed by a timber bridge, supported on a timber bent, at each end, the old wooden abutments being rotten, and unserviceable. A narrow strip of ground, on the south side of the channel, separates it from the timber basin.

CANAL LANDS.

Besides the properties leased by the Government in connection with the hydraulic privileges at Basin No. 2 and Locks Nos. 3 and 4, there are other lands belonging to the Canal, as follows :—

The piece of ground known as Windmill Point, south side of Lock No. 2, occupied by the building used for Canal offices, and a dwelling house and sheds for the Lockmasters at Locks 1 and 2, and the keeper of the swing bridge, the tail-race from the waste weir at this end of the basin also passing through it near the western boundary.

A piece of ground at Point St. Charles, purchased in 1850 or 1851 from the Hôtel Dieu Nunnery and Seminary of Montreal, containing about 55½ arpents, bounded on the north by Basin No. 2 and the tail-race from the waste weir, on the west by Wellington Street, on the south by Etienne Street, and on the east by the property of Mr. James Hodges.

This ground was purchased for the construction of basins, and is temporarily occupied by the Grand Trunk Railway.

A piece of unoccupied ground lying west of Wellington Street, between St. Patrick and Canal Streets, containing 4.56 arpents.

A piece of ground on the north side of the Canal, between Lock No. 3 and St. Gabriel Basin, extending from the Canal to St. Gabriel Street, purchased from the Seminary of Montreal, and containing 22 arpents.

This land was also acquired for the construction of basins, and is now temporarily leased for lumber yards.

Land on the flats north side of Canal, above Lock No. 4, purchased from the farm proprietors after the completion of the new Canal, containing about 160 English acres, and leased to Patrick Evers for farming purposes.

A triangular piece of ground on north side of Canal, below "rock cut" at Lachine, purchased from J. Larmonth, containing 38½ French perches.

There is another lot on same side, containing about 4 arpents, French measure, and a piece purchased from the Estate Robertson, containing about 2 arpents.

BEAUHARNOIS CANAL.

The Beauharnois Canal forms the second link in the improvements of the Upper St. Lawrence Navigation, and is situated on the south side of the river, in the County of Beauharnois. The Canal is 11¼ miles long, and, by means of 9 locks, overcomes a fall of 82 feet 6 inches in the St. Lawrence at the Côteau, Cedars and Cascade Rapids.

The lower entrance is situated at the southern extremity of Lake St. Louis, three miles from the Village of Beauharnois, and the upper entrance at the lower end of Lake St. Francis, at Valleyfield.

With the exception of a small amount of rock-cutting at the lower terminus and at St. Timothy, the excavations were through earth, from which the banks were formed. The inside slopes throughout their whole extent are protected with a dry rubble wall, 4 feet in height, in the same manner as the Lachine Canal. The banks and slope walls are in good condition.

The prism of the Canal is 80 feet wide on bottom, 120 feet at line of surface water, and 10 feet deep, with 9 feet water on the sills of the locks.

The towing-path is formed altogether on the north bank.

The locks are constructed of the same description of masonry, laid on timber foundations, as those of the Lachine Canal, and of the same capacity, but, owing to similar causes, now vary from their original width of 45 feet between piers to 44 feet 2 inches. All the locks are lighted at night with kerosene oil.

The lock gates are built of solid timber, with cast-iron valves, and are worked in the same manner as those on the Lachine Canal.

Lock No. 6 forms the entrance from Lake St. Louis, the original margin line of the lake passing under the chamber below the upper gates. Two piers are placed below the lock for the accommodation of vessels. The pier on the north side extends from the wing wall downwards 535 feet; 185 feet at the lower end is 18 feet wide on top, 30 feet on bottom, and strongly built of close crib work below level of low water, with a continuous superstructure of timber, and ballasted with stone. The Canal side is sheeted with 3-inch oak plank, the outside protected by an ice-breaker of oak timbers 1 foot square, and the surface planked. The balance of 350 feet is built of stone taken from the excavation, faced with a heavy rubble wall, and is about 60 feet in width.

The pier on the south side is built of timber, and commences at the shore line 260 feet to the east of the wing wall, and extends through shallow water 267 feet in a northerly direction to a point 120 feet from the pier on the north side, where it forms an angle of 130 degrees, and continues parallel with the latter pier for a length of 183 feet. This portion is 18 feet 6 inches wide, and the other 11 feet 6 inches. The outside of this pier is protected by an embankment of stone.

A dry rubble wall supports that portion of the lock embankment on the south side which is next the river. The outside of the embankment on the north side is formed of refuse stone from the excavation.

Two bumping posts of oak timber are placed on the face of the wall at the piers above and below the upper gates, on each side of this and all the locks on the Canal.

The masonry is in good condition, and the lock still retains its original width of 45 feet between piers. The chamber is only 199 feet 8 inches in length, and the walls 23 feet 1 inch high. The lift is 11 feet.

A stone building for the Lockmaster, and a stone house with wooden outbuildings for the Collector of Canal Tolls, are situated on the south side, opposite the upper entrance to the lock, and a stone building situated on the same side, about midway on the reach, between Locks 6 and 7, for the lock laborers.

A waste weir is placed in the bank on the north side, 100 feet above the lock, with a tail-race discharging into the river 150 feet from the weir. A timber bridge, 56 × 12 feet, is placed on the line of the towing-path, over the weir.

Lock No. 7 is situated 1,130 feet above Lock No. 6, with a regulating weir and tail-race on the south side, and a swing bridge over the lock chamber.

A retaining wall of rubble masonry extends 90 feet from the wing wall on each side above and below the lock. The Lockmaster's house is situated on the north side, 130 feet from the upper entrance.

The lock masonry and gates are in good condition, the width between piers is 44 feet 6 inches, the height of the chamber walls 23 feet 1 inch, and the lift 11 feet.

Lock No. 8 is situated 900 feet above No. 7, with a regulating weir and race-ways on the south side, and a swing bridge over the lock chamber, with a retaining wall of rubble masonry on each side above and below. The Lockmaster's house is situated on south side of lock.

This lock is in good working order; the width between piers is 44 feet 7 inches, the height of the chamber walls 23 feet 7½ inches, and the lift 10 feet 7 inches.

Those three locks were built on rock foundations, with timber and plank under the recesses and lower wing walls.

The reach between Locks 8 and 9 is 1,380 feet in length, and forms a large basin of shallow water, except through the channel on the north side, and is 520 feet wide at the lower end, and 330 feet at the upper end.

Lock No. 9 is 1,380 feet above No. 8, with a regulating weir and raceway round the lock on the south side, and a swing bridge over the lock chamber, with retaining walls at each end.

The Lockmaster's and lock laborers' houses are situated between the weir and lock.

The width between piers is 44 feet 11 inches, the height of the chamber walls 22 feet 5 inches, and the lift 10 feet 6 inches.

Lock No. 10 is situated 1,320 feet above the latter lock. The head-race to the regulating weir, leaves the Canal 130 feet above the upper entrance, and continues round the south side of the lock, a distance of 590 feet, to the weir, and discharges into the Canal, 60 feet below. A swing bridge is also placed over the lock chamber.

The Lockmaster's and lock laborers' houses are built on the piece of ground lying between the lock and head-race; the former is a stone, and the latter an old wooden building.

This lock is in good order, and is 44 feet 11 inches in width; the chamber walls are 22 feet 10 inches in height, and the lift 10 feet.

Lock No. 11 is situated 5,440 feet from No. 10, with a regulating weir and race-way on the south side, and a swing bridge over the lock chamber.

A stone house for the Lockmaster is built on the south side of the lock, and a wooden house, with stone foundation, for the lock laborers, on the north side.

A rubble wall extends from the upper and lower wing walls, in the same manner as at the preceding locks.

The lock and gates are in good condition. The width between piers is 44 feet 6 inches, the height of the chamber walls 20 feet, and the lift 8 feet.

Lock No 12 is 5,490 feet from Lock No. 11, with a regulating weir and race-ways on the south side, a swing bridge over the lock chamber, and retaining walls of rubble masonry for supporting the banks, above and below the lock.

The masonry is in good condition. The width between piers is 44 feet 9 inches, the height of the chamber walls 22 feet 2 inches, and the lift 10 feet 2 inches.

Two houses of stone are built on the south side, for the Lockmaster and laborers.

Lock No. 13 is situated 10,200 feet above No. 12, with a regulating weir and race-way on the south side, a swing bridge over the chamber, and retaining walls at each end.

A stone house for the Lockmaster is built on the south, and one for the laborers on the north side.

The lock is in good working order. The width between piers is 44 feet 2 inches, the chamber walls 21 feet 8 inches high, and the lift 9 feet 6 inches.

Lock No. 14, or Guard Lock, is situated at the Village of Valleyfield, six miles above No. 13, and 3,160 feet below the upper end of the Canal. The supply weir and race-way are constructed on the south side, and a swing bridge over the chamber, on the line of the main road. The race-way above the weir is covered with plank, which has been renewed this summer. and a guard railing 3 feet high built along the south-side of the tail-race and weir.

The retaining walls, on each side, above and below, are in good order.

The dwelling house for the Lockmaster is on the south, and for the laborers on the north side. Both buildings are of stone, one story high, and in good condition.

The walls, gates, &c., are in good order. The width between piers is 44 feet 6 inches, and the height of the chamber walls 14 feet.

Since the completion of the dams there has been a lift of about two feet at this lock.

A substantial timber pier and wharf, 400 feet in length, ballasted with stone, is built, for the accommodation of vessels on the south bank, at the upper entrance of the Canal, where it turns in a right angle towards the south bank of the river, and is continued 90 feet. This portion of the pier is 12 feet in width, and in good repair.

SWING BRIDGES.

There are nine swing bridges on the line of this Canal, constructed of timber, on the same principle as those of the Lachine Canal.

Eight of these bridges are built of a uniform size, viz., 82 feet in length, 9 feet 6 inches in width between standards, and 15 feet 6 inches from underside of cap to surface of road-way, and are placed over the several lock chambers, commencing at Lock No. 7. They are all worked from the south side of the locks.

The ninth bridge, of about the same dimensions, is placed over the Canal, 4,240 feet above Lock No. 13, on the line of road leading to the Village of St. Timothy.

These bridges are all in good working order. Those over Locks Nos. 7, 11, 12 and 14 have recently been rebuilt.

Those over Locks Nos. 7 and 14, and at St. Timothy, are road bridges; all the others are farm bridges.

The St. Timothy bridge rests on abutments of cut stone masonry, and are 51 feet apart at top, the south abutment supporting the bridge when open.

The face of the abutment, on the north side, is 17 feet long, with wing walls 64 feet in length, extending to the line of Canal bank. Protection cribs of timber, filled with stone, have since been built above and below, starting in line with the face of the abutment, and receding about one foot in ten. The crib on the upper side is 52 feet in length, where it turns on an angle of 40 degrees, and continues 40 feet to the Canal bank, and is 14 feet wide. The crib below extends 85 feet from the abutment to the angle, thence to the Canal bank 40 feet, and is 15 feet 6 inches wide. The spaces between the rear of these cribs, the wing walls, and bank of the Canal, have been filled with clay.

The abutment on the south side is 91 feet in length on the face, with wing walls extending 60 feet in rear, diverging in the same manner as on the north side, with protection cribs built above and below. The cribs are of a triangular form, their bases resting against the stone wing walls of the abutment, and are each 31 feet in length to the point of the angle, and 39 feet to the Canal bank, with a width of 20 feet at the broadest part all in good condition.

A frame house, with stone foundation, occupied by the bridge keeper, is built near the bridge, on the south side.

WEIRS.

There are thirteen wiers connected with this Canal, viz.:—One large supply weir of feeder at the head; seven large regulating weirs at the locks; two waste weirs, one of large dimensions, at Lock No. 6, and a small weir at St. Timothy; two weirs, for supplying water to the hydraulic properties at Valleyfield, and a waste weir from the head-race to the mills, at west end of lower dam.

The waste weir, at Lock No. 6, is placed in the Canal bank, on the north side, 100 feet above the lock, and is built on a rock foundation, with side walls of rock-faced masonry, and a breast wall, partly of cut stone, and partly of rock-faced work, with four sluice openings, 4 feet square, fitted with gates, sliding vertically in timber frames, secured to the face of the breast wall. One of the gates is hoisted by an iron lifting screw, secured in a frame work, of iron and timber, on the platform above the weir, and the other three with levers.

The platform, for raising the gates, on this and all the regulating weirs, consists of four sticks of pine timber, 12×12 inches square, laid closely over the breast wall, and resting on the side walls, and a pier in the centre.

The regulating weir, at Lock No. 7, is situated on the south side of the lock, 119 feet above the upper entrance, the tail-race discharging into the Canal 112 feet below the lower gates. The weir is built on the same plan as that at Lock No. 6, of the same description of masonry, and rests on a natural rock foundation.

There is a timber bridge, above the weir, 55×12 feet, with a guard railing, 3 feet high, on each side. A bridge, 34×18 feet, with guard railing, 4 feet 3 inches high, on the line of road over the lock, and another, 31×12 feet, laid over the lower end of the race. These bridges all rest on abutments of dry rubble masonry, and are in good order.

The bottom of the race-way is excavated through rock, and the clay slopes above are supported by dry stone walls, which are generally in good condition.

The regulating weir, at Lock No. 8, is situated on the south side, nearly opposite the lower gates, with a head-race 312 feet in length, opening in the bank above the upper protection wall, and the tail-race discharging into the Canal, 157 feet below the weir. This weir is constructed on the plan of the two former, and also rests on a natural rock foundation. The bottom of the race-way is also excavated through rock, with stone slope walling to protect the clay banks. A timber bridge, 53 feet six inches × 12 feet, with side railing, 3 feet high, is placed across the weir, and a small bridge, 26 × 12 feet, over the lower end of the tail-race.

The weir, bridges and walls of race-ways are in good state of repair.

The regulating weirs for Locks Nos. 9, 10, 11, 12, and 13, rest on timber foundations, and are built on the same plan and dimensions as described for the waste weir, at Lock No. 6, with bridges at each end of the race.

The race-ways are all through clay cuttings, 20 feet wide at bottom, and 50 feet at surface water. The banks, below the weirs, are generally supported with a heavy retaining wall of rubble masonry, laid in mortar.

At a distance of 3,430 feet above Lock No. 13, a structure, which forms a by-wash, waste weir and culvert is placed in the bank, on the north side of the Canal, and is known as the St. Timothy Waste Weir. The structure is composed of side walls, and two breast walls of masonry, 66 feet in length, the inside breast wall supporting the Canal bank in front, with wing walls, built at right angles, extending into the Canal, and battering off to conform to the inside slope of the bank. Two walls, placed 10 feet 6 inches apart, also extend from the inside breast wall, towards the Canal, from the centre of the weir, which have checks cut in their upper ends, for the reception of a breast work of timber, placed in a line with the outside breast wall, in which there is one sluice for the discharge of water.

These breast and wing walls, form a well, into which the water flows before passing through an arched culvert-way, 6 feet high, and 5 feet wide, by 30 feet in length, built under the Canal bank, from the breast wall outward, where it connects with a tail-race, which passes through the Village of St. Timothy, and afterwards discharges into the St. Lawrence.

Supply Weir at Upper Entrance.—This weir is situated on the south side of the guard lock, at Valleyfield, 50 feet from the lower gates. The race-way is 540 feet long, the sides supported with vertical protection walls of rubble masonry, and enters the Canal 200 feet below the weir.

This weir is built on a timber foundation, with side walls and centre pier of rock-faced masonry, laid in regular courses, and a breast wall, rock-faced in rear, and hammer-dressed on the upper face, with six openings, 4 feet square, fitted with sluice gates, turning horizontally on a cast-iron step, in the same manner as the gates to the supply weir, at the head of the Lachine Canal, and worked from a foot bridge above. Stop checks are cut in the side walls and sides of the centre pier, directly over the breast wall, for the insertion of stop logs.

The weir and race-ways are in good order.

Supply Weir for Hydraulic Lots Nos. 1, 2, 3, 4 *and* 5, *at Valleyfield.*—This weir is situated at the east end of the lower dam, and is built on a timber foundation, with side walls of regular masonry, and breast wall, having six sluice openings. The two central openings are 6 feet high by 4 feet wide, and the other four, 4 feet square. A rubble wall, 512 feet in length, built in mortar, forms the north side of the head-race, to the mill privileges. Openings 15 feet wide, with side walls 20 feet in length, are left in the wall for head-races to the mills on each lot. The head-race is 36 feet wide on bottom.

A protection wall of rubble work, in mortar, extends along the bank, 59 feet above the weir, on the south side, terminating in a curved dry wall, which extends along the river bank 23 feet in length. The south side of the head-race, below the weir, is protected at surface water with a dry rubble wall, and the outside of the bank, at the lower end of the race, is supported by a dry retaining wall. A timber bridge, 40 × 24 feet, with guard railing, 3 feet high, is laid over the weir; and four small bridges, 18 × 18 feet, are placed across the openings for side races, in the north wall. The water for driving a flour mill, with four run of stone, built by Stephen May, on Lot No. 5, is taken from the lower end of the race, through a head-race of timber and plank.

The weir and head-race to the mills are in good order.

The weir, at the west end of the dam, is 163 feet in length, built with side walls and four centre piers, which separate the weir into five divisions, each 24 feet in width. These divisions are closed by stop logs, supported by the side walls and piers. A timber bridge, 165 feet in length by 18 feet in width, with guard railing 3 feet 4 inches high, is laid over the weir, and a foot bridge or platform of the same length, for raising the stop logs.

This weir admits the water to the head-race for supplying the hydraulic properties on La Grande Ile, and is in good order.

A waste weir is constructed in the eastern bank of the head-race, immediately below the supply weir. This weir is built with side walls, centre pier, and stop logs, the same as above described, and is 52 feet in length, with two stone piers, 15 feet long, in the centre of the weir, which divide it into three equal parts. The waste water through this weir is discharged into the river channel below the dam.

A bridge, 61 × 12 feet, with guard railing 3 feet 4 inches high, is placed over the weir, and forms a passage to the mills.

The head-race leading to the mills is excavated to Lot No. 2, and the east side protected with a rubble wall as far as the line of Lot No. 1.

CULVERTS.

There are ten culverts passing under this Canal, constructed principally for the discharge of water from the ditches on the south side. They are all built of stone, and with the exception of a large culvert above Lock No. 12, and the first culvert below the Guard Lock, on the same plan, and of a uniform size, viz.:—An arched water-way under the Canal, about 160 feet in length, with an opening 4 feet high by 3 feet wide, connecting with a well at each end, where the bank is supported by a breast wall, 11 feet in width on the face and 12 feet in height, with wing walls diverging to a width of 22 feet at their ends. A plank and timber covering is placed over the south entrance to the culverts to prevent them from being filled and choked up with snow and ice in winter.

The first culvert, commencing from the lower end of the Canal, is situated 3,069 feet above Lock No. 10.

The second in succession is a large culvert, 600 feet above Lock No. 12, built of cut stone masonry, consisting of an arched tunnel under the canal, 223 feet in length, with a breast wall 18 feet in height, 25 feet 6 inches wide, and wing walls diverging to a width of 49 feet 6 inches at the ends, for supporting the bank. The archway is 12 feet high, and 12 feet wide, with an offset from the bottom course, on the lower side, 2 feet wide, and and 20 inches high, intended for a footway through the culvert. This structure appears in perfect order.

The third is a small culvert, situated 4,158 feet above the latter; the fourth, 590 feet below Lock No. 13; the fifth, 990 feet above the lock, and four others between the St. Timothy Bridge and Lock No. 14; the first, 1,683 feet; the second, 6,336 feet; the third, 9,306 feet; and the fourth, 14,553 feet above the bridge, all of which are in good order.

The last culvert is situated 6,240 feet below Lock No. 14, and has a double arch and water-way under the Canal, each opening being 5 feet high and 4 feet wide. On the north, or river side, the bank is supported by a wall 48 feet in length, standing 4 feet above the surface of ground, with wing walls, placed 13 feet apart, and 9 feet in length, branching from the end of the arch to a width of 24 feet at their ends. This structure is also in good condition.

FERRY SCOWS.

There are two ferry scows maintained on the long level between Locks Nos. 13 and 14, for the accommodation of the farmers.

The first ferry is 8,712 feet above the St. Timothy Bridge, where recesses, 48 feet in length and 12 feet in width, are excavated in the banks, and supported with timber docking, for mooring the scows.

There is an old frame building on the south bank, 35 × 15 feet, occupied as a dwelling by the ferryman.

The second ferry is maintained at a distance of 7,425 feet from the first, with recesses in the banks, and an old wooden house, on the south side, for the ferryman, as at the first.

BUILDINGS.

1*st. Dwellings for Lockmasters, Lock Laborers, &c.*—There is a stone house, 30 feet 8 inches by 22 feet 4 inches, one story high, at each lock on this Canal, erected for Lockmasters' dwellings, all from the same design, and in good state of repair.

There are also six stone and two wooden buildings at the several locks for dwellings for the lock laborers, and three old wooden buildings, one for the keeper of the St. Timothy Bridge, and one each for the ferrymen.

A good stone building, with out-houses, on the south side of the Canal, opposite Lock No. 6, is occupied by the Collector of Canal Tolls for a dwelling house and office, and a stone cottage on the bank of the river, opposite Lock No. 9, occupied as a dwelling house by the Local Superintendent.

2*nd. Store Houses and Workshops.*—A frame building has recently been erected on the south side of the Canal, above Lock No. 9, for a workshop, and for the storage of Canal supplies. There is also an old shed adjoining the lock laborers house, used for storing old iron, &c.

3*rd. Watch Houses.*—There are eight small frame buildings, 6 feet square, placed on the locks as watch houses for the lockmen.

DITCHES.

A line of ditching is excavated along the outside of the south bank of the Canal, from the head down to Lock No. 9, for the purpose of draining the adjoining farm lands. The total length of the ditches is about 400 arpents, and the surface water which they receive is carried off by the culverts passing under the Canal.

DAMS.

Two dams are constructed in the river, at the head of the Canal, for the purpose of raising the water at the upper entrance. The first, called the lower dam, is built of irregular crib work, covered and protected on both sides with large stones, and extends from the main shore, 650 feet north of the Guard Lock, to the east side of La Grande Ile de Beauharnois, a total distance of 660 feet. The upper surface of the dam is covered with earth, and forms a road for communication between Grande Ile and the main shore. As already remarked, a weir is situated at each end for supplying water to the mill privileges below the dam.

A dyke, built of earth, from 1 to 4 feet in height, faced with stone, extends, from the west end of the dam, along the shore at the upper end of La Grande Ile, a distance of 1,200 feet, and from the east end of the dam to a point opposite the Guard Lock, a further distance of 300 feet.

The second dam is placed across the channel, between La Grande Ile and the east bank of Clark's Island, at a point 1¼ miles upward, in direct line from the lower dam. This dam is 800 feet in length, built of crib work, with earth embankments forming slopes on each side, which are protected with stone. An embankment, 300 feet in length, is continued from the west end of the dam. Both are in good repair.

DYKE THROUGH HUNGRY BAY.

This dyke extends southward from Knight's Point, about one mile above the upper entrance of the Canal, along the eastern shore of Hungry Bay, to near the line of the Township of Godmanchester, a total distance of $4\frac{86}{100}$ miles, and was constructed to protect the low lands, lying along the margin of the lake, from being flooded at times of high water.

The dyke was built 14 feet wide on top, with side slopes of one and a half to one, and raised 2 feet above the level of the coping on the Guard Lock. A puddle trench, 6 feet in width, was sunk in the centre to the clay stratum beneath, and filled with clay, which was continued to the surface of the dyke, forming a puddle wall 6 feet thick throughout its whole length. Wooden culverts are laid at various points under the embankment, and a line of ditching excavated on the inside, with off-take drains leading to the River St. Louis, and into the feeder to the Seigniorial Mills.

At a distance of 740 yards from the end on Knight's Point, a flume and bulkhead, with sluice gates, are placed in the embankment, for the admission of water to the feeder for the Seigniorial Mills, on the River St. Louis.

Two thousand two hundred feet of the embankment, which is exposed to the surf of Lake St. Francis, is walled with stone.

The embankment is used as a roadway, which caused it to spread and settle, but it is now in good repair.

PIER AND BREAKWATER, AT GROSSE POINT.

This pier and breakwater are about two miles from the upper entrance of the Canal, on the south side of the channel, and were constructed for the accommodation and security of vessels detained by fog or high winds.

They are built of crib work, with a continuous superstructure of timber, ballasted and filled to the surface with stone. The breakwater is 500 feet in length and 15 feet wide, and the pier, which forms an angle of 63 degrees from the line of the breakwater, is 160 feet long, with a surface width of 33 feet.

The upper end of the pier terminates in an angular ice-fender, sheeted with iron. Both pier and breakwater are furnished with mooring posts, and are in good repair.

WATER POWER.

The only power actually leased and brought into use, is at the ends of the lower dam at Valleyfield.

These privileges consist of Lots Nos. 1, 2, 3 and 4, at the east end of the dam, occupied by Alexander Buntin, for manufacturing paper, with which he has leased power sufficient to drive twelve run of ordinary mill stones; and Lot No. 5, at the lower end of the race, leased by Stephen May, on which he has built a flouring mill, with 4 run of stones, making a total power leased at this end of the dam equal to 16 run of ordinary mill stones. Lots Nos. 1 and 2, at the west end of the dam, were originally leased to F. X. Poitras, with water for driving 12 run of stone of 10 horse power each, making a total power leased equal to 28 run of stones.

Lot No. 1 is now occupied by Mr. Anderson, as a grist and saw mill, and Lot No. 2 by Messrs. Wattie & Co., who have just started a wooden manufactory.

MOORING PIERS.

There are three mooring piers in connection with the St. Lawrence route, built for the accommodation of vessels passing down the rapids, below Côteau.

The first is situated on the north side of the river, in Rousseau's Bay, at the foot of the Côteau Rapids, three miles above the Cedars.

The second is also on the north side of the channel, at the foot of the Cedar Rapids, in Bocco Hayes Bay, three miles below the Cedars.

The third is in the bay, on the south side of the channel, about one mile above Lachine Rapids.

These piers are 70 feet in length by 20 in width, built of crib work filled with stone ballast, covered with plank, and furnished with mooring posts. They were completed in the fall of 1856, and are now considerably decayed above line of surface water.

ST. OURS LOCK AND DAM.

These works are situated about 14 miles above Sorel, and one and a half miles above the Village of St. Ours, and form the lower portion of the Richelieu River improvements, by raising the water four feet, which sets back to the lower entrance of the Chambly Canal, a distance of about 32 miles.

The dam is divided into two parts, by an island about 8 arpents in length by one in width. The main dam is situated near the upper end of the island, on the west side, and is 600 feet in length, between abutments, built of crib work, with a continuous superstructure, all filled with stone hearting. The upper side of the crib work is sheeted with 3-inch plank, which also forms a sheet piling below the cribs. The top of the dam slopes each way from the apex, about three to one on the upper side, two to one on the lower, and is also covered with 3-inch plank. The angle above the crib work is filled with an embankment of clay. Below the dam, two tiers of cribs have been sunk, forming an apron about 40 feet in width, the entire length of the dam, to protect it from being undermined. The abutments are built of solid cut stone masonry, with wing walls extending into the original formation, well banked up in rear. The face of the abutment is 15 feet in length, with two wing walls of 30 feet, which stand about 8 feet above the apex of the dam.

The face of the island abutment has been broken, and partially carried away, by high water and ice, and rebuilt with rubble masonry, which stands well. The foundation of the west abutment appears to have settled and allowed the walls to crack. Both of these abutments were much exposed, and have been protected by rip-rap walls, placed so as to form a slope of about one to one in front, which protects them from high water and ice. The river banks, at each end of the dam, are high, formed of clay, and subject to heavy slides; to prevent this about 600 feet on each side, below the dam, have been protected with rip-rap walls of field stones. The upper end of the island has also been guarded in the same manner.

There are two anchor cribs, 30×30 feet, sunk about 200 feet from each shore, and 200 feet above the apex of the dam, well filled with stone. These cribs are placed angular, so that the upper corner faces and divides the current. The upper sides are sheeted with plank. The cribs break the ice and prevent it from packing on the dam, and are used for anchoring scows or barges used in repairs.

This entire structure rests on a clay foundation, and its safety depends very much on the maintenance of the apron cribs.

The east portion of the dam is 300 feet in length, situated about the centre of the island, formed of solid embankment raised above high water mark, 25 feet wide on top, with slopes of two to one. The upper slope is protected with a pavement of field stones. The lock is placed in the centre of this embankment, and is 200 feet between quoins, with the usual wing walls, and 45 feet in width, built of cut-stone masonry, on a timber foundation. The mitre sills are placed 7 feet below the line of low water. The upper end of the lock, commencing 50 feet below the upper gates, is raised 3 feet 6 inches, with steps in the coping between the high and low portions of the lock.

The gates are built of solid timber, the same as for the Lachine Canal, and the lower gates worked in the same manner, but the upper gates are supported by a suspension rod attached to a bolt passing through the toe of the gate, at the line of low water, the upper end passing round a pivot placed over the top of the heel post. This suspension rod passes down each side of the gate, and is graduated by screw buckles, by which the toe of the gate is raised and lowered instead of by friction rollers, as described for other gates. This pivot is attached to a large cast-iron plate, which is anchored to the coping stone with wrought-iron bars, with nuts and screws at the ends for adjusting the position of the pivot. These gates are worked by a crab and endless chain, passing over a snatch block on the coping, and attached to the end of a triangular frame work of timber, 6×6 inches square, made fast to the top of the gates. The upper angle is supported by a roller, which works on a segment on the top of the lock. This arrangement works well, and the gates, when once properly adjusted, remain so during the season.

The piers above and below the lock are raised to the height of the coping. They consist of frame work, with posts of square timber, framed in bents, 6 feet wide, placed 10 feet apart, and connected at the top with longitudinal stringers, bolted to the caps of each bent, over which there is a flooring of plank, with a railing in rear 3 feet high. The inside posts extend above the pier, and are used for mooring vessels. The bents are also connected with side fender timbers, bolted to the posts. There is a plank ballast box, 3 feet in depth, filled with stone, placed at the line of low water, throughout the entire length of each pier. The pier below the lock is 420 feet in length, supported at the lower end by a solid crib, 26 feet in length by 15 in width, carried above line of low water, with steps leading to the top of the main pier. The pier above the lock is 270 feet long, with a solid protection pier 10 × 12 feet square, with steps from surface of low water to the top of pier.

The lock is lighted at each end with kerosene oil lamps, and the lower entrance by a lamp at the end of the pier.

The embankment below the dam, east side of lock, is 15 feet wide at top, with outside slopes of two to one. The west embankment connects with the island, which has been levelled down to a corresponding grade, and forms a site for the buildings connected with the works. They consist of a brick house for the Superintendent, 34 × 28 feet, one and a half stories in height; an old one-story building, of wood, 36 × 22 feet, one half being used as a summer kitchen, &c., by the Superintendent, and the other as an office for the Superintendent and the Collector of Tolls. There is also an old wooden building, 23 × 15 feet, used for storing government property connected with the works.

These works and structures are all in good order, except the old building occupied as an office, &c., which requires repairs.

The Seignior has a grist mill, situated on the main shore, east of the lock, driven by water taken through the east end of the embankment, in a head-race of framed timber and plank. This head-race is maintained by the proprietors of the mill, and is now in very good order.

CHAMBLY CANAL.

This Canal is situated on the west side of the river, between Chambly Basin and St. John's, a distance of 12 miles. Theprism of the Canal is generally 30 feet on bottom, and about 60 feet at surface water.

There are 8 lift locks, which overcome a fall of 74 feet. They are situated on the lower, or Chambly section, all within one and three-fourth miles of the Chambly Basin.

Lock No. 1, or Guard Lock, is near the St. John's entrance. The lock walls are all built of cut stone masonry, on timber foundations, with the ordinary framed gates, worked by swing beams.

Locks Nos. 7, 8 and 9 are combined, located in bank of the river, and form the lower entrance of the Canal at Chambly. They are 125 feet between the quoins, and 23 feet 9 inches in width between piers. The upper mitre sills were built of cut stone, in connection with the breast walls. The upper sills, in Locks Nos. 9 and 7, have recently been renewed with oak timber. There are stone steps in the lower wing walls of Locks Nos. 7 and 8, for the accommodation of persons working the locks, &c.

The gates are of the ordinary framed pattern, planked on the upper side, with swing beams for working them. The sluice gates are placed in the walls, opposite the recesses, except at the lower gates at Lock No. 9, where they are between the two lower cross bars. In addition to these, a third sluice has been fixed in each pair of gates, to facilitate the lockage. All the sluices are worked by rack and pinion wheel gearing, turned by a crank.

The masonry in these locks is light, and has been a good deal jarred and shaken by heavy laden vessels and steamers, and leak more or less around the upper gates, and from the sluices in the walls.

The banks are generally 15 feet in width on top, with outside slopes of two to one, except the east bank, at Lock No 9. This being a water lock, the outside of the bank is held up by a stone wall, 8 feet of the upper portion being of cut stone masonry—same as the lock walls—and is really a continuation of the lower wing wall. With the exception of the leakage in the walls, these locks and fixtures are in good working order.

Lock No. 6 is situated about 2,500 feet above No. 7; No. 5—750 feet above No. 6; No. 4—300 feet above No. 5; No. 3—2,200 feet above No. 4. These locks are 118 feet between quoins, and from 23 feet to 23 feet 7 inches in width. The walls are all of cut stone masonry, built on timber foundations; they all leak more or less from the effects of jarring. The mitre-sills are of timber, placed one foot above top of the foundation; the breast walls are above the upper recesses. The gates are the same as at Locks Nos. 7, 8 and 9; the sluices in the gates worked with rack and pinion gearing. The banks are 15 feet on top, with outside slopes of two to one.

Lock No. 2 is 1,800 feet above No. 3, and is 124 feet between quoins, and 23 feet 3 inches in width, built of cut stone masonry, on a timber foundation. The breast wall is at the upper gates, on which there is a stone mitre-sill; the upper sluices are in the walls. The lower mitre sill is of timber, placed on the foundation, to which it is bolted. The gates are the same as above described, with sluices between the lower cross bars. The sluices are all worked with rack and pinion gearing.

This lock and fixtures may be considered in good working order.

The Guard, or Lock No. 1, at St. John's, located 3,000 feet below the upper entrance, is also built of cut stone masonry, on a foundation of timber, with oak mitre sills, standing 1 foot above the bottom, to which they are bolted. The gates are the same as above described, with two sluices in the lower gates and four in the upper, to afford an increased supply of water when required; there are checks for stop-logs in the upper wing walls. This lock also leaks through the walls around the upper gates, but is otherwise in good working order.

The difference in the length of the locks is caused by the breast walls of the longest locks being placed below the upper gates on which the mitre sill rests. This only increased the length of locking capacity over the upper mitre sill.

The prism of the Canal, between Locks Nos. 7 and 2, is through clay cuttings, and formed with berm and towing-path bank, so located that the excavation formed the embankments. This portion has been kept well cleared, so that two loaded vessels can pass at any place between the locks.

Between Lock No. 2 and the Ste. Thérèse Mills, a distance of two and a half miles, the ground slopes towards the river, where only a towing-path bank is formed, except for a distance of about 300 feet at each of the two culverts, where there is a berm bank; the earth taken from the regular excavation appears to have been sufficient to form the embankments. This portion of the Canal is through clay cutting. The inside slopes of the towing-path, at water surface, are generally protected with stone, but the berm side is still unprotected. The wash from the banks, and silt and deposit brought in from the farm ditches, have raised and contracted the channel at bottom, so much so that large square-bottomed vessels, find it difficult to pass through, drawing six feet of water. It is also too narrow for two loaded vessels to pass, except where extra width has been made for that purpose.

From the Ste. Thérèse Mills to Fryer's By-wash, a distance of about 600 feet, the Canal is along the river edge, with only the towing-path bank between the Canal and river. The natural river bank forms the berm on which the road between Chambly and St. Johns passes. This berm is high, and slides down, which contracts the channel-way. The out, or river side of the bank, is well paved with field stones, which protect it from the action of the water. About 3 feet in height on the inside slopes, at surface water, is also protected with stone.

From Fryer's By-wash to the lower end of Ste. Thérèse Island, a distance of about 1,000 feet, is through cutting, which is in good order. It then passes along the west branch of the river which forms Ste. Thérèse Island, 500 feet, where the towing-path divides the Canal from the river; this portion is also in good order, the river slope of the bank being paved with field stones, and the inside protected with slope wall at surface water. At this point the towing-path bank is built across the west branch of the river, to Ste. Thérèse Island, a distance of 700 feet, which forms a dam that raises the water about 6 feet above the water in the river. This dam is protected on both sides with field stone paving, and is in good order. From this dam the west branch of the river forms the Canal, which is from 200 to 700 feet in width, and from 8 to 20 feet in depth, until it passes the Island, a distance of about two and a half miles. The banks on each side are high, and are annually suffering by slides, and must be protected with stone. At the upper end of the Island another dam is formed across the west channel, and the Canal continued along the bank of the river to St. Johns, a distance of four miles. The outside slope of the bank is well paved, and the largest portion of the inside slopes at surface water. The berm is the natural river bank, which is generally high, and is constantly washing down and filling the channel-way in the Canal. This entire bank must be walled, before this portion of the Canal can be kept free from bars and obstructions. The bottom of the Canal, above the Guard Lock and in front of the wharves at St. Johns, is considerably filled up with silt and sediment, and the outside or river bank requires raising.

There are but three culverts under this Canal, built of timber, 120 feet in length, 8 feet wide by 3 feet in height. They pass under the Canal and banks, the ends connecting with wells of rough stone masonry, which also support the banks. They are located as follows, viz.:—No. 1 two miles, and No. 2 three-fourths of a mile above Lock No. 2; and No. 3 about 1,000 feet below Lock No. 6. They are in good order.

There are eight swing bridges, 52 feet in length by 10 feet in width. No. 3, at Ste. Thérèse Mills, four miles above Chambly, and No. 8, at Chambly, are road bridges, all the others are farm bridges, situated as follows: No. 1, at Edson's, six miles below St. Johns; No. 2, at Fryer's, half a mile below Edson's; No. 3, Road Bridge, at Ste. Thérèse Mills; Nos. 4, 5 and 6, are situated about half a mile apart between Bridge No. 3 and Lock No. 2; No. 7 is between Locks Nos. 3 and 4; and No. 8 on the upper wing walls of Lock No. 7, at Chambly. These bridges are built of pine timber, with transverse truss sides, with a gallows frame, over which a suspension chain passes for supporting the toe when open—this chain is graduated by screw buckles. The bridge turns on a pivot, placed in the centre of the bridge, about six feet from the face of the abutment, and turns on rollers, which support the heel. They work very easily, and are turned by hand, without the assistance of machinery. The upper wing walls of Lock No. 7 are used as abutments for Bridge No. 8; all the others have abutments of cut stone masonry, and swing to the berm side of the Canal. This masonry is light, and has been a good deal broken and shaken by vessels. The abutments on the towing-path at Bridges 4, 5 and 6, have been strengthened with timber, and all the wing walls protected with timber guards. They are now in good order.

There are two other swing bridges near St. Johns, owned and supported by private individuals. The first in connection with the toll-bridge which connects St. Johns with Iberville. This bridge has abutments of cut stone masonry, with timber guards at each end, and is in good order. The second is at Mr. Langelin's Mills, about half a mile below the Guard Lock. The abutments and approaches consist of tamarack piles, capped with timber and supported with braces; it is well kept and in good order.

There are also four towing-path bridges over the by-washes, viz.:—at Wood's Creek, 26×23 feet; Lapaune's, 92×12 feet; Fryer's, 112×12 feet; between Locks Nos. 6 and 7, 26×12 feet each.

There are six by-washes for discharging and regulating the water; No. 1, at Wood's Creek, one mile below St. Johns, 26 feet in length, built on a timber and plank foundation, the ends supported with a docking of timber, 23 feet in length, with stop-logs raised or lowered by Spanish windlass. The stop-logs are supported in the centre by a bent of timber.

Lapaune's By-wash is situated at the east end of the dam at lower end of Ste. Thérèse Island, and consists of an overfall 92 feet in length, on which slash-boards are kept in summer and removed in winter. Fryer's By-wash is a combination of waste weir and by-wash, with four sluices, 4×3 feet, placed in a frame breast work of oak timber. supported with braces. The sluices are regulated by rack and pinion the same as at the locks. There is also an overfall of 56 feet in length which can be raised or lowered by stop logs. This structure is built of framed timber bolted to a rock foundation.

The other three are located between Locks Nos. 4, 5 and 6, and consist of an overfall built of timber, with plank aprons and timber docking for supporting the banks. No. 4 is 12 feet in length, and Nos. 5 and 6, 24 feet in length. These structures are all in good order.

There are three wharves, viz.—at entrance into Chambly Basin, built of cribs, with a continuous superstructure filled with stone hearting; it is 317 feet long by 24 feet in width. The top of this wharf is only about four feet above the line of low water in the river, and in ordinary seasons is entirely under water until about the 1st of July, and should be raised; the top timbers are getting rotten. The wharf above Lock No. 7 is on the berm side of the Canal, built on piles covered with plank, and 170 feet in length by 24 in width, and is in good order. The third is at St. Johns, and extends from the upper entrance of the Canal down to the toll bridge, and consists of three divisions, faced with docking timber, filled with earth and stone. The first portion is 210 feet in length by 63 in width; the second 542×75 feet; and the third 560×68 feet; making a total of wharfage accommodation at St. Johns of 1,312 feet, with an average width of 68 feet. This wharf was repaired last year, and is in good order.

There are two Collectors' Offices, built of brick, one story in height, situated,—one at the Guard Lock at St. Johns, 40×18 feet, and one at Chambly, 38×32 feet. There are also three frame lock-houses, 24×16 feet, one story high, situated at Locks Nos. 2, 6 and 8; and one at Lock No. 5, 24×12 feet, one story high. There are also watch houses, built of wood, at each of the locks and bridges, 12×12 feet square, 8 feet high, fitted with berths, and supplied with a stove for the accommodation of the lock and bridge tenders.

There are two old frame buildings used for storing government property and for workshops; the one at Chambly is 53×25 feet, and at St. Johns, 24×24 feet; these buildings are all in good order except the store at St. Johns, which is much out of repair.

Each lock and bridge keeper is furnished with a hand lamp. The locks and bridges are also each provided with a large kerosene oil lamp. There is no light on the wharves.

STE. ANNE'S LOCK AND DAM.

These works form the first or lower portion of the Ottawa River improvements above Lachine. They are situated at the Village of Ste. Anne, 13½ miles above the upper entrance of the Lachine Canal, and consist of a lock and wing dam, two guide cribs on the south, and five on the north side of the channel, above the lock, and a long pier on the north or land side of the channel below, with a short pier extending into the river, from the south lower wing wall of the lock.

This lock is situated in the river, near the north shore, at the foot of the Rapid of Ste. Anne, with a lift of 3 feet in low water, which overcomes the fall. It is built of cut stone masonry, on a foundation of timber and plank, resting on seamy, rotten sandstone, and is 190 feet in length between quoins, and 45 feet in width, with the usual wing walls. The north upper wing wall extends 35 feet, to connect with the wing dam of Jones' Mill, which is situated between the lock and shore. The mitre sills are of oak timber, raised one foot above the foundation, to which they are bolted. The gates are of solid timber, the same as described for the Lachine Canal, and are worked in the same manner.

The outsides of the embankment are supported with timber dockings. The south, or river side, is 35 feet in width, with a grade outwards of about one to six. The upper end of the north embankment is 40, and the lower end 15 feet in width. The top is on a level with the lock walls. The docking on the outside of the embankment forms one side of the tail-race, leading from Jones' Mill, over which there is a truss bridge, 45 feet in length, and 12 feet wide. The north end rests on an abutment of crib work, filled with stone, and the south end on the docking that supports the embankment.

The wing dam connects with the upper south wing wall and embankment, and extends to the head of the rapids, a distance of 840 feet, with an ice breaker at the upper end. This dam is built of timber, 20 feet in width, carried up to a level of 6 inches below the lock, filled with stone hearting, and covered with 3 inch plank. 400 feet of the inside, above the lock, is faced with 4 inch tamarack plank.

The channel above the lock is narrow, and does not follow the line of the dam, but is protected with two guide piers on the south side. The upper one is 80 feet long by 15 feet wide, situated 600 feet above the lock. The second is 15×15 feet, placed 60 feet below the upper pier. There are also five of these piers on the north side of the channel. The first, or No. 1, connects with the north wing wall, and extends upward on line of channel, 160 feet by 15 feet in width, built on detached cribs, with a continuous superstructure. Nos. 2, 3, 4 and 5 are each 15 feet square. No. 2 is 90 feet above No. 1; No. 3, 40 feet above No. 2; No. 4, 40 feet above No. 3; and No. 5, 80 feet above No. 4. These piers are all raised to the height of the wing dam, well filled with stone, and provided with mooring posts. The lower end of the dam, and upper end of the lock, are furnished with bumping posts to protect the works during high water.

The south, or river pier, below the lock, is 67 feet long and 24 feet wide; raised 9 feet above line of low water; well filled with stone. The front, or Canal side, and lower end, are faced with three-inch plank, and the corners protected with iron straps. There is also a large bumping post, well fixed, in the lower corner. It is also well provided with mooring posts.

The pier on the north, or land side of the channel, commences 150 feet below the lower north wing wall of the lock, and extends downward 900 feet by 17 in width, built 9 feet above surface of low water. 250 feet of the upper portion is solid crib work; the balance is of detached cribs, placed 10 feet apart, with a continuous superstructure above line of low water; the whole well filled with stone, and provided with mooring posts, placed 50 feet apart.

The lock is lighted at night with two kerosene oil lamps, placed on the south embankment, opposite the upper and lower gates. The lock laborers are provided with a frame building for a watch-house, 20 × 12 feet square, and 8 feet high, furnished with a stove and berths.

The Collector and acting Lockmaster has a brick house and office, one and a half stories high, 31 × 24 feet, situated on the main road, about 150 feet from the lock, on a strip of ground purchased for a road.

Two of the piers of the tubular iron bridge, on the line of the Grand Trunk Railway, are situated on the outside of the embankment, opposite the lower wing walls of the lock, the lower side of the girders being about 40 feet above line of low water.

There are also two guide piers placed on a shoal, about one mile below the lock.

These works are all in good order, except portions of the long pier, below the dam, and the small guide piers, north side of the channel, above the lock, which will require repairs this season. The upper pier, north side of the channel, should be extended about 200 feet, for mooring vessels waiting to pass the lock.

CARILLON CANAL.

This Canal is situated on the north side of the river, at Carillon, and forms the lower section of the Carillon and Grenville Canals.

The Canal is $2\frac{9}{100}$ miles in length, and overcomes the fall in the Carillon Rapids. It has three locks, and is supplied with water, through a feeder, from the North River, which enters the Canal one mile from the upper end, and is 3,275 feet in length.

The prism of the Canal is generally through rock cuttings, and, for a distance of 3,700 feet above the locks at Carillon, is from 30 to 40 feet on bottom, with irregular side slopes; it then passes through a natural basin, about 200 feet in width, for a distance of about 3,000 feet, formed by placing an embankment across a ravine near the river. Although this basin forms a large water surface, which is very important as a reservoir, it does not afford sufficient depth of water for loaded vessels, except in the channel-way, along the towing-path bank, on the north side of the Canal. From this basin to the upper entrance, the Canal passes through a thorough cutting, generally 40 feet in width at bottom, with irregular side slopes. The low portions of the banks have been raised this season, and the water is now kept at a depth of 6 feet on the sills at the locks, except when drawn down by constant lockages at each end of the Canal; this, however, only occurs at seasons of low water in the North River.

The upper entrance of the feeder is now about 20 feet wide at bottom, but the main channel, above the regulating weir, has a water-way of only 10 feet on bottom and 14 feet at surface, and passes through a cutting of hard gravel and boulders of from 5 to 15 feet in depth.

The weir for regulating the water is situated 500 feet from the Canal, and is built with side walls of cut stone masonry, resting on a timber foundation. The water is drawn through three sluice-ways of 4 feet 3 inches by 3 feet 5 inches in size, formed in a breast work of timber placed between the walls of the weir. The sluices are worked by rack and pinion gearing. There is a fall of about 15 feet between the weir and Canal, where the water falls over a ledge of rocks. A temporary dam of field and boulder stones is placed across the North River below the feeder. This dam is only required during seasons of low water, when it is raised and repaired for diverting water to the Canal.

Locks Nos. 1 and 2, at Carillon, are combined, built of cut stone masonry, on a rock foundation. The bottom is flagged with square blocks of stone, placed on a level with the top of the mitre sills, except at the recesses, where it is sunk one foot to allow the gates to have a bearing against the sills. The lower sill of Lock No. 1 is of oak timber, the upper sills are of cut stone, resting on and forming the coping of the breast walls. The north chamber wall of Lock No. 2 leaks badly, and is curved in about 8 inches in the centre. The sluice gates are in the walls opposite the gates. These sluice-ways all leak more or less, from which the water spreads through the walls, but with proper care they may be made to stand for some years. The sluice gates are worked by rack and pinion gearing, attached to the top of the frames.

The gates are of the usual framed pattern of oak timber, planked on the upper side, worked with balance beams. They are opened and closed by a chain attached to the outer end of the balance beam, passing through a snatch block fastened to the coping of the lock, and over pulleys to a crab turned by a crank. The gates are new and in good order.

Lock No. 3 is at the upper end of the Canal, built in the same manner as Locks Nos. 1 and 2, and, with the exception of leakage from the sluice-ways in the walls, is in good order. The gates are new and work well.

The walls of these three locks are more or less affected by frost every year, which has forced in the sides from 2 to 9 inches.

Lock No. 1 is 128 feet in length by 32 feet 6 inches at the upper end, and 31 feet 9 inches between the piers above the lower recess. Lock No. 2 is only 126 feet 6 inches in length by 32 feet 6 inches wide at the upper, and 32 feet at the lower end. They have a lift upward of 21 feet 9 inches. Lock No. 3 is 126 feet 6 inches in length by 32 feet 3 inches in width, and locks downward 13 feet.

A macadamized road, built and maintained by the Department, passes along the north side of this Canal, from which it is only divided by a narrow strip of ground used for a towing-path, and a cedar log and block fence.

The Superintendent's house is situated between Lock No. 1 and the road. It is built of stone, two stories high, 33 feet 9 inches in length by 20 feet 8 inches in width, with a framed one-story wing 19 feet 3 inches by 19 feet 2 inches, with framed outbuilding, 34 by 15 feet.

The Collector's and Superintendent's offices are on the point between Lock No. 2 and river, built of stone covered with tin, one story high, 26 feet 10 inches by 25 feet 8 inches, with two porches, 8 feet 5 inches by 7 feet 2 inches.

The Lockmaster's and Collector's house is situated between the Canal and river, about 400 feet from Lock No. 2. It is an old block house covered with clap-boards, one story high, and 28 × 19 feet, with a kitchen, 17 × 14 feet, and a shed, 25 × 11 feet.

There is also an old one-story framed building, 35 × 18 feet, situated on the point between Lock No. 1 and river, used for storing Canal property. The lock laborers are furnished with sleeping apartments in the rear portion of the Collector's office.

There is also a one-story storehouse, 26 × 20 feet, at the regulating weir in the feeder, occupied by one of the laborers at Lock No. 3. The Lockmaster's house, at Lock No. 3, is situated between the lock and river, built of stone covered with tin, 27 × 27 feet, one story high, with two porches, 7 feet 6 inches by 9 feet 3 inches. There is also a watch-house and store-room on the north side of the lock, covered with inch boards, 24 × 16 feet, one story high.

There is a small mooring pier, 20 × 12 feet, on the north side of the channel, 300 feet above Lock No. 3, built last spring for the accommodation of vessels when waiting to pass the lock.

CHUTE À BLONDEAU CANAL.

This Canal forms the middle section of the Carillon and Grenville Canals, and is situated on the north side of the river, at the Chute à Blondeau Rapids, and passes through a point of deep rock cutting, one-eighth of a mile in length, 30 feet wide at bottom, with nearly perpendicular sides. Portions of the bottom are now fully 18 inches higher than the sills at the lock, which reduces the depth of water to about four and a half feet, in extreme dry seasons.

The lock is 130 feet 10 inches, between quoins, 32 feet 10 inches in breadth at the upper, and 36 feet 4 inches at the lower end, with a lift of 3 feet 9 inches. The walls are of solid rock, except at the quoins and recesses, and 4 feet of the upper portion, which consist of dressed stone masonry. The gates are the same as described for the Carillon Canal, except the sluices, which are placed between the two lower cross bars, worked by rack and pinion placed on top of the frames which extend above the swing beam. The lower gates are new, and in good order. The upper gates are old, and decayed.

There are a few acres of ground attached to this Canal, occupied by the Lockmaster, and for a lane to the main road.

There is also a one-story stone house, 48 × 24 feet, occupied by the Lockmaster as a dwelling, and a watch-house, 10 feet square, for his accommodation, on the south side of the lock.

GRENVILLE CANAL.

This Canal is situated on the north side of the river, between Greece's Point and the Village of Grenville, a distance of five and three-quarter miles, and forms the upper section of the Ottawa River improvements, below Ottawa City.

There are six lift locks on this section, which overcome a fall of 45 feet 9 inches, in the Long Sault Rapids, and a guard lock at the Grenville entrance.

Locks Nos. 5 and 6 are combined, and form the lower entrance to Greece's Point. They are built of cut stone masonry, on rock foundations, with flagged bottoms, and stone mitre sills built in connection with the breast walls, the same as Locks Nos. 1 and 2, at Carillon. The sluice gates are all in the walls, worked with rack and pinion gearing. To guard against high water in the river, the walls of Lock No. 5 are raised to the same height as Lock No. 6, which is the natural surface of the ground. This lock is not used for locking until the water falls, which is usually about the 1st of July. The walls are a good deal broken, and require extensive repairs. The gates are the same as described for the Carillon Canal, and worked in the same manner. They work well, but are old and more or less decayed.

Lock No. 5 is 130 feet 8 inches, between quoins, and 32 feet 2 inches in width. No. 6 is 128 feet 4 inches in length by 32 feet 4 inches in width.

Locks Nos. 7 and 8 are also combined, situated 1,500 feet above Lock No. 6, and consist of cut stone masonry, on a rock foundation, with paved bottoms and cut stone mitre sills, which form the coping to the upper breast walls, with steps in the wing walls which connect the locks. The sluices are in the walls, as at Locks Nos. 5 and 6.

The tops of the chamber walls have been thrown in by the frost, and several of the face stones forced out of place. For years there has been a leakage from the sluice ways, and through the wall past the centre gates, which can only be stopped by rebuilding.

The embankments are level with the surface of the ground, and slope about one to one between the locks.

Lock No. 7 is 128 feet 4 inches between quoins and 31 feet 10 inches in width. No. 8 is 128 feet between quoins, and 32 feet 2 inches in width.

Lock No. 9 is 4,300 feet above Locks 7 and 8, built of cut stone, on rock foundation, with flagged bottom. The lower sill is of oak timber. The upper sill rests on the breast wall, as at the locks below. The walls are in very good order. The stones in the upper mitre sill and breast wall are crumbling away. A portion of the stone in the sill has been replaced with wood, and cannot last longer than the present season. The walls have, this season, been raised 12 inches, with timber bolted to the coping, and supported with timber cross heads extending into the bank, and the bank, which was on a level with the natural surface, raised to correspond. The upper sluices are in the walls, the lower in the gates, worked by rack and pinion. The gates are of oak timber, framed and planked, with a swing beam used for working. The gates have also been raised to correspond with the extra height of the wall. The lower gates are new; the upper old, and in bad order.

This is one of the small locks, and is 107 feet 8 inches between quoins, by 19 feet in width.

Lock No. 10 is 15,200 feet above Lock No. 9, and is 106 feet 10 inches in length, by 19 feet 3 inches in width, and with the exception of the slight variation in size, is the same as Lock No. 9, only in better order. The upper sill is good; the lower gates new, but the upper old and decayed.

Lock No. 11, or Guard Lock, is situated at Grenville, 7,000 feet above Lock No. 10, placed in a deep rock cutting, built of cut stone masonry, on a rock foundation, with flagged bottom. Both mitre sills are on a level with the Canal bottom. It is 107 feet 5 inches in length, by 19 feet 1 inch in width. The gates are new, with sluice gates between the lower cross bars.

The prism of the Canal, between Locks Nos. 6 and 7, is 50 feet wide at bottom, with irregular slopes, and passes through cuttings of rock and clay; the surface being of clay, with rock below. The reach between Locks Nos. 8 and 9, is principally through rock cuttings, from 20 to 30 feet at bottom, with irregular side slopes, provided with passing places, arranged above Lock No. 9, about the centre, and near the upper end of the reach.

For a distance of about 4,500 feet above Lock No. 10, the Canal passes through rock and earth cuttings, generally 30 feet wide at bottom, with irregular slopes. It then enters a deep rock cutting, where the Canal is reduced to 20 feet at bottom, with side slopes of about one-fourth to one, which extends to Lock No. 11, a distance of 2,500 feet. There are, however, passing places provided, where two loaded vessels can pass, one above Lock No. 10, and two between the lock and the deep rock cutting, besides a new one, 400 feet in length, placed 200 feet below Lock No. 11, which was commenced in March last, but left about two feet above Canal bottom. Between Lock No. 11 and, river the Canal is 25 feet at bottom, with side slopes of about two to one, except through the rock excavation near the lock. The upper end is protected on the south side with crib work, and on the north side with a slope wall.

The depth of water on this Canal is now maintained at 6 feet on the sills of the locks, except on the reach between Locks Nos. 9 and 10, where the banks are being raised for that purpose.

There are five by-washes on this Canal, for regulating the height of water on each of the levels. They are all in the berm bank, and discharge into the river. The first is about 800 feet above Lock No. 6, and consists of a stone culvert, about two feet square, leading from the bottom of Canal to the river. About 25 feet from the Canal there is a wall leading from the surface of the ground to this culvert, in which a sluice gate and frame is placed, for regulating the discharge of water. The second is about 1,000 feet above Lock No. 8, and consists of abutments and a breast wall, built of cut stone masonry, with a sluice in the centre of the breast wall, 3 × 4 feet, worked with rack and pinion gearing, with two overfalls of 10 feet each, for the discharge of surface water. The third is about one-fourth of a mile above Lock No. 9, and consists of cut stone abutment walls, with stop logs 8 feet in length.

The fourth is about one and a quarter miles above, on the same reach, built of cut stone abutments with a breast wall, and a sluice 3 × 4 feet, worked with a lever, and two surface water overfalls of 10 feet each.

The walls of these two have been raised 12 inches, with timber, to correspond with the extra height of the lock walls.

The fifth is 1,000 feet above Lock No. 10, with cut stone abutments, a breast wall, and a sluice, 3 × 4 feet, raised with a lever, and a surface overfall of 12 feet in length. These structures are all in very good order, built on rock foundations, but the sluices are not low enough to dry the Canal, when required for cleaning the bottom, which adds very much to the expense of keeping it in navigable order. There being no culverts, all the drainage from the north side enters the Canal, and is constantly filling it with silt and deposit.

There are but two swing bridges over this Canal; the first is a farm bridge over the centre of Lock No. 9, 43 feet in length by 11 feet in width, and swings to the berm side of the lock. The second is a road bridge, at Grenville, with abutments of cut stone masonry, which connect with the lower wing walls of Lock No. 11, and swings to the berm side; it is 43 feet in length by 11 feet in width. They are built and worked in the same manner as those described in connection with the Chambly Canal. These bridges are both old, and must be rebuilt.

Combined Locks Nos. 5, 6, 7, and 8, are all in charge of one keeper, who has a house on the strip of land between the Canal and river, situated about 400 feet above Lock No. 6. It consists of a one-story stone building, 28 × 20 feet, with a frame addition, 28 × 16 feet, covered with shingles, and in good condition.

There is also an old one-story stone building, 40×28 feet, situated 200 feet above the Lockmaster's house, the front occupied as lodgings for one of the lock laborers, and the rear for storing Canal property, and is also in very good repair.

At Locks Nos. 9, 10 and 11, the Lockmasters are each furnished with a stone house, 28×20 feet, one story in height, and about half an acre of ground each for gardens. The house at Lock No. 11 has a frame addition in rear, of 12 feet in width. One of the laborers at this lock is also furnished with a frame house, 18×12 feet, one story in height. These buildings are all in good repair.

I have the honor to be, Sir,
Your obedient servant,

JOHN G. SIPPELL,
Resident Engineer.

LACHINE CANAL.

STATEMENT of the dimensions of Weirs and Raceways connected with Lachine Canal.

SITUATION.	WALLS.		BREAST WALL.				HEAD-RACE.			TAIL-RACE.			Condition.	REMARKS.
	Length.	Height.	Length.	Height.	Sluice openings.		Length.	Width at top.	Width at bottom.	Length.	Width at top.	Width at bottom.		
					No.	Size.								
	ft.	ft. in.	ft.	ft. in.		ft.	ft.	ft.	ft.	ft.	ft. in.	ft.		
Supply weir at Guard Lock	32	18 3	49	9 9	8	6 x 4	350	41	33	280	41 0	33	Good	Dry wall of raceway supported by timber braces.
Waste weir above Lock No. 4........................	12	14 0	11	9 6	2	3 x 3	Weir pla	ced in ca	nal bank.	52	17 6	16	do	Dry walls of tail-race require repairs.
Regulating weir at Lock No. 4.....	36	15 0	50	12 6	8	5 x 4	....	....	....	236	36 0	33	do	
Waste weir above Iron Railway Bridge	12	14 0	11	9 6	2	3 x 3	Weir pla	ced in ca	nal bank.	300	....	....	do	Discharges into little River St. Pierre.
Waste weir upper end of Basin No. 2..............	25	14 8	99	11 6	8	....	Weir pla dock	ced in lin wall.	e with	183	98 ft. bel 35 ft. end	ow weir.. of race...	do	Raceway continued with unprotected sides to River St. Lawrence.
Waste weir at lower end of Basin No. 2............	....	....	30	9 6	5	....	....	....	....	260	30 ft. bel 15 ft. mai	ow weir.. n race....	do	Plank covering on tail-race bad.

LACHINE CANAL.

STATEMENT of the location, dimensions and condition of Culverts under the Lachine Canal.

SITUATION.	DIMENSIONS OF MASONRY WALLS.					TIMBER TUBING.		CONDITION.
	Height of breast walls.	Width on face.	Width between wing walls.	Length of wing walls.	Thickness of walls above ground.	Length.	Size of opening.	
	ft.	ft. in.	ft. in.	ft. in.	ft. in.	ft.	ft. ft.	
Culvert above Wellington Bridge	16	12 0	5 6	12 6	2 6	144	4 × 4	Good.
Between Brewster's Bridge and Lock No. 4	22	20 6	13 6	11 6	3 0	144	6 × 6	Good.
Above Côte St. Paul Lock..............................	18	10 0	5 0	14 0	2 6	144	4 × 4	Requires pointing; otherwise good.
Culvert above Brewster's Bridge for passage of pipe for the Montreal Water Works....	....	....	....	....	....	148	....	

LACHINE CANAL.

STATEMENT giving location, dimensions, condition, &c., of Permanent Bridges over Weirs, &c., Lachine Canal.

SITUATION.	Material of which built.	Dimensions.				REMARKS.
		Length.		Breadth.		
		ft.	in.	ft.	in.	
Lower end of Old Canal locks at Montreal.	Timber	34	7	14	0	In good order.
Over Old Canal lock on line of Mill Street, Montreal..................................	do	38	7	18	2	do do
On line of Mill Street over tail-race first waste weir	do	32	0	25	0	do do
Over tail-race to large waste weir upper end of Basin No. 2	do	44	0	34	0	do do
Platform over weir on line of dock wall..	do	106	0	13	0	do do
Over old Canal used as a head-race for the mills at Lock No. 3, on line of Seigneurs Street	do	67	0	36	0	Maintained by the City Corporation.
Over tail-race from saw mill on land between Old and New Canal, Lock No. 3..	do	60	0	24	0	do do
Over waste weir in bank above Railway bridge...	do	20	0	13	0	In good condition.
Tow-path bridge over entrance to Parkyn's Race	do	66	0	12	0	Built and maintained by Mr. Parkyn.
Foot bridge over weir at Côte St. Paul..	do	60	0	12	0	In good condition.
Bridge over lower end of tail-race to Côte St. Paul..	do	40	0	13	0	do do
Over head-race to mills at Côte St. Paul.	do	79	0	16	0	do do
Over small waste weir above Côte St. Paul Lock	do	18	6	12	0	do do
Over upper end of head-race at Guard Lock from road to wing dam..........	do	53	0	12	0	do do
Over upper end of head-race at Guard Lock, on line of road	do	46	8	24	7	do do
Over weir, for working gates................	do	51	0	9	0	do do
Over lower end of tail-race	do	57	9	9	0	do do
Tow-path bridge over Old Canal, below lock	do	50	0	11	0	do do
Over Old Canal, on line of road...........	do	26	0	23	0	do do
Foot bridge over Old Canal lock.........	do	28	0	9	0	do do
Over Old Canal, opposite Old Hudson Bay Store...	do	72	0	12	0	do do

LACHINE CANAL.

STATEMENT of the situation and dimensions of Piers, Cribs, &c., on the Lachine Canal.

SITUATION.	DIMENSIONS.		Hearting or stone filling.	Condition.	REMARKS.
	Total length.	Breadth at surface.			
	ft.	ft. in.			
Pier below Lock No. 1.............	249	14 0	Stone.	Superstructure requires repairs...	The harbour commis'rs have assumed control of this pier.
Centre piers, Wellington Bridge..	84	17 0	do	Good.	
Docking opposite sugar factory...	400	....	....	do	
Docking on North side below old St. Gabriel Lock......................	249	... .	....	Bad order.............	Built by mill owners.
Docking on North side above lock No. 3................................	365	....	....	do	do do
Centre piers, Brewster's Bridge...	86	17 0	do	Timber in superstructure old.	
Docking below do ...	129	....	.. ..	Good	Rebuilt last spring, '67.
Do do ...	478	....	.. ..	Requires rebuilding.	
Pier above Côte St. Paul Lock.....	239	....	do	Good.	
North pier below Lock No. 5......	83	11 6	do	do.	
South do do	100	11 6	do	Superstructure requires repairs.	
Long pier at Lachine.......	4,650	21 0	do	Good	Stone superstructure.
Piers for supporting booms at Lachine, viz :—					
Nos. 1 & 2...	24	15 0	do	These piers are all in good condition.	
do 3........	52	15 at ends and 20 at centre	do		Angle Pier.
do 4 & 5	24	15 0	do		
do 6.	52	15 at ends and 20 at centre	do		Angle Pier.
do 7 & 9...............	24	15 0	do		These piers stand seven feet above line of high water.
do 8.....	40	15 0	do		
do 10, 11 & 12.............	20	15 0	do		
do 13......	30	15 0	do		
do 14.......................	24	15 0	do		
do 15.......................	40	15 0	do		
do 16............	24	15 0	do		
do 17........	40	15 0	do		
do 18........................	29	15 0	do		
do 19........................	39	15 0	do		

LACHINE CANAL.

STATEMENT shewing the amount of Water-power and other property leased on the line of the Lachine Canal, up to 30th June, 1867.

Where situated.	Original Lessee.	Present Occupant.	Description of Mill, &c.	Amount of Power.	Annual Rent.	REMARKS.
					$ cts.	
Basin No. 1	Hamilton & Gildersleeve	Canada Inland Steam Navigation Company	Freight Shed		75 00	
do	Montreal and Salaberry Steamboat Company	St. Lawrence Navigation Company	do		20 00	
do	American Line of Steamers	American Line of Steamers	do		20 00	
do	M. K. Dickinson	M. K. Dickinson	do		60 00	
Lot No. 1, Basin No. 2	Frothingham & Workman	Frothingham & Workman	Store House and Yard	None	392 00	
E. ½ of No. 2, do	do		Steam Elevator and Corn Mill	do	264 00	
W. ½ of No. 2, and lots 3 and 4, do	W. P. Bartley	W. P. Bartley	Iron Foundry and Machine Shop	4 run of stone taken from lots 5, 6 and 7.	1290 00	
Lot 5 and E. ½ of 6, do	do	James McDougail	Flour Mill and Elevator	4 run of stone		
W. ½ of 6, and lot 7, do	do	Thomas Peck & Co	Spike and Nail Manufactory	4 do		
Lot No. 8, do	James Harvey	James Harvey	Elevator and Warehouse	4 do	430 00	
E. ½ of No. 9, do	do	Thomas Peck & Co	Coal Yard	None	110 00	
W. ½ of No. 9, and lot No. 10, do	Thomas Peck & Co	do	Rolling Mill and Nail Factory	4 run of stone	540 00	
Lot No. 11, do	James McDougall	James McDougall	Flour Mill and Elevators	4 do	430 00	
Lots Nos. 12 and 13, do	Ira Gould	Gould & Sons	do	8 do	864 00	
Lot No. 14, do	do	do	do	4 do	432 00	
Lot No. 15, do	T. D. Bigelow and wife	Bigelow & Pillon	Spike and Nail Factory	4 do	430 00	
Lot No. 16, do	Holland & Dunn	do	Rolling Mill	4 do	430 00	
Lot No. 17, do	Wm. Lyman & Co	Lyman, Clare & Co	Oil and Plaster Mill	4 do	430 00	
Lots Nos. 18 and 19, do	Grant, Hall & Co	Grant, Hall & Co	Flour Mill and Elevators	8 do	860 00	
Dry Dock, do	Geo. & Wm. Tate	George Tate	Dry Dock, Saw and Planing Mill	4 do	1,000 00	
St. Gabriel Lock	Hon. John Young and Ira Gould	Who have leased the surplus water, and sub-let it as under:—			1,680 00	
Lot No. 1, North side		A. Cantin	Saw and Planing Mill	1200 inches of water		150 inches are called a run of stone.
do 2, do		Redmond	Foundry and Machine Shop	600 do		
do 3, do		P. W. Wood	Cotton Manufactory	1200 do		
do 4, do		R. Forsyth	Stone and Marble Works	600 do		
do 5, do		F. H. Simms	Machine Shop	600 do		

LACHINE CANAL—*Continued.*

STATEMENT shewing the amount of Water-power and other property leased on the line of the Lachine Canal, up to 30th June, 1867.

Where situated.	Original Lessee.	Present Occupant.	Description of Mill, &c.	Amount of Power.	Annual Rent.	REMARKS.
Lot Lo. 6, do		Stacey	Nail and Spike Factory	200 do		
do 7, do		J. W. Hilton	Furniture Manufactory	1200 do		
do 8, do		Weaver	Woolen Cloth Manufactory	400 do		
do 9, do		A. W. Ogilvie & Co.	Flour Mill and Stone House	1950 inches of water		
do 10, do		McDougall	Foundry and Machine Shop	400 do		
W. ½ of No. 11, do		John Smith	Agricultural Implements and File Manufactory	150 do		
E. ½ of No. 11, do		J. & D. Tees	Furniture Manufactory	150 do		
Lot No. 12, do		Morland, Watson & Co.	Saw Factory	500 do		
do 13, do		A. W. Ogilvie & Co.	Corn and Barley Mill	650 do		
do 14, on Island		J. W. McGauvran & Co.	Saw and Planing Mill	600 do		
do 15, South side		John Converse	Cordage Factory and Plaster Mill	1200 do		
do 16, do		James Shearer	Sash and Door Factory	600 do		
do 17, do		Wm. Mocock	Axe Factory	100 do		
do 18, do		John Ostell	Sash and Door Factory	300 do		
do 19, do		Tucker and Son	Saw and Planing Mill	750 do		
Island above Lock No. 3	Augustin L'Abbé	Augustin L'Abbé	Ship Yard	None	100 00	
At Grand Trunk Crossing	Morley & Lewis	Morley & Co	Foundry	3 inch pipe	10 00	Water for engine.
Côte St. Paul Lock	Wm. Parkyn	Who has leased the entire surplus water and hydraulic lot, and sub-let as under:—		Surplus water	1,601 00	
Lot No. 1, South side Canal		Parkyn & Brodie	Flour Mill	1500 inches water		
do 2, do		J. J. Higgins & Co	Axe and Edge Tool Work	800 do		
do 3, do		Frothingham & Workman	Shovel Factory	918 do		
do 4, do		do	Scythe do	686 do		
do 5, do		P. & J Dunn	Nail do	600 do		
do 6, do		Parkyn & Brodie	Flour Mill and Elevator	2700 do		
do 7, do		G. Gilmour	Auger and Bitt Factory	300 do		
do 8, do		J. C. Clarke	Bell Factory			Power obtained from lot 7.
do 9, do		Paxton	Saw Mill	2000 do		Not in use.
do 10, do		do	Barrel Factory	900 do		do.
North side of Canal	Patrick Evers	Patrick Evers	Farm	None	40 00	
				Total $	11,508 00	

BEAUHARNOIS CANAL.

STATEMENT of the dimensions of Weirs and Raceways connected with Beauharnois Canal.

SITUATION.	WALLS.				BREAST WALLS.						HEAD-RACE.				TAIL-RACE.				Condition.	REMARKS.
	Length.		Height.		Length.		Height.		Sluice openings.											
									No.	Size.	Length.	Width at top.		Width at bottom.	Length.	Width at top.		Width at bottom.		
	ft.	in.	ft.	in.	ft.	in.	ft.	in.		ft. in.	feet.	ft.	in.	feet.	feet.	ft.	in.	feet.		
Waste weir Lock No. 6........	36	0	12	3	50	0	9	0	4	4 × 4	15	50	0	50	150	30	0	30	Good.	Weir in Canal Bank.
Regulating weir Lock No. 7..	36	0	13	0	50	0	10	0	4	4 × 4	15	50	0	50	520	24	0	20	do	do do
Do do No. 8..	36	0	13	0	50	0	10	0	4	4 × 4	312	50	0	20	157	50	0	50	do	
Do do No. 9..	37	0	16	6	50	0	13	6	4	4 × 4	400	50	0	20	70	50	0	20	do	
Do do No. 10..	37	0	16	6	50	0	13	6	4	4 × 4	590	50	0	20	60	50	0	50	do	
Do do No. 11..	36	0	14	2	48	0	11	3	4	4 × 4	190	50	0	20	390	40	0	25	do	
Do do No. 12..	37	0	16	2	50	0	13	2	4	4 × 4	396	50	0	20	230	40	0	25	do	
Do do No. 13..	37	0	15	6	50	0	12	6	4	4 × 4	400	50	0	20	200	40	0	25	do	
St. Timothy waste weir	22	6	15	0	10	6	12	3	1	3 × 3	....	....		....	ditch lea	ding to		river.	do	Breast work of timber with sluice inserted in stop checks.
Supply weir Lock No. 14.....	35	0	15	2	36	0	10	2	6	4 × 4	540	27	6	24	200	27	6	24	do	
Do East end lower dam	35	0	13	0	36	0	10	3	4 2	4 × 4 6 × 4	512	45	0	36	....	....		....	do	
Do West do do	....		....		163	0	....		5	24 wide.	300	80	0	60	....	....		....	do	Opening formed for stop logs.
Waste weir do do	Wing walls, 52.		13 on W side, 8 on E side.		59	9	4	0	3	17.'9" × 7.6	Weir in	Bank. ...		....	Ditch to	river...		....	do	do do

BEAUHARNOIS CANAL.

STATEMENT shewing dimensions, &c., of Permanent Bridges over Weirs, Raceways, &c., on the Beauharnois Canal.

SITUATION.	Materials of which built.	DIMENSIONS.				CONDITION.
		Length.		Breadth.		
		ft.	in.	ft.	in.	
Over waste weir, Lock No. 6	Timber	56	0	12	0	Good.
Foot bridge for working sluice gates, do	do	55	0	4	0	do
Lower end of tail-race from end Lock No. 7	do	31	0	12	0	do
Road bridge over middle of tail-race, do	do	34	0	18	0	do
Over weir, do	do	55	0	12	0	do
Foot bridge over weir, do	do	55	0	4	0	do
Lower end of tail-race from weir at Lock No. 8	do	26	0	12	0	do
Over weir at Lock No. 9	do	53	6	12	0	do
Foot bridge for working gates, do	do	53	6	4	0	do
Over weir, do	do	55	0	12	0	do
Foot bridge over weir, do	do	55	0	4	0	do
Over head-race to weir at do on line of Canal bank	do	36	0	12	0	do
Over slip to carpenter's shop above Lock No. 9	do	53	0	10	0	Old, but in good order.
Over head-race to weir at Lock No. 10, on line of Canal bank	do	35	0	12	0	Good.
Foot bridge over do	do	55	0	4	0	do
Over tail-race from weir at do	do	88	0	12	0	do
Over weir, Lock No. 11	do	61	0	12	0	do
Foot bridge over do	do	61	0	4	0	do
Over head-race to weir at Lock No. 12, on line of Canal bank	do	35	4	12	0	do
Over tail-race from do do	do	27	0	12	0	do
Foot bridge over weir	do	55	0	4	0	do
Over head-race to weir at Lock No. 13	do	40	0	12	0	do
Foot bridge over weir	do	55	0	4	0	do
Over weir East end of lower dam	do	40	0	24	0	do
Three small bridges over side races to Buntin's Factories, East end of lower dam	do	18	0	18	0	do
Over weir West end of lower dam	do	165	0	18	0	do
Foot bridge for raising stop logs	do	165	0	4	0	do
Over ditch near Poulin's House	do	15	0	12	0	do
Over waste weir in head-race West end of lower dam	do	61	0	12	0	do
Over ditch on line of road above guard lock	do	36	0	12	0	do

BEAUHARNOIS CANAL.

STATEMENT of Buildings connected with Beauharnois Canal.

SITUATION.	Material of which built.	Dimension. Length.		Breadth.		REMARKS.
		ft.	in.	ft.	in.	
Lockmaster's house, Lock No. 6........	Stone.	30	8	22	4	One story, roof shingled, in good order.
Collector's house & office at do	do	40	3	24	6	do do do
Lock laborer's do Locks Nos. 6 & 7..	do	41	0	24	6	do do do
Lockmaster's do Lock No. 7........	do	30	8	22	4	do do do
Do do Lock No. 8...	do	30	8	22	4	do do do
Lock laborer's do do	do	30	6	24	6	do do do
Lockmaster's do Lock No. 9........	do	30	8	22	4	do do do
Old lock laborer's do do	Wood.	32	7	12	3	do do dilapidated.
Do do do	Stone, plastered out side.	40	7	25	6	do do in good order.
New store house & workshop do	Wood.	40	0	24	0	Two stories, do do
Old do do do	do	37	6	14	6	do do dilapidated.
Lockmaster's house, Lock No. 10......	Stone.	30	8	22	4	One story, do in good order.
Lock laborer's do do	Wood.	32	0	12	4	do do old but habitable
Lockmaster's do Lock No. 11......	Stone.	30	8	22	4	do do in good order.
Lock laborer's do do	Wood stone foundation.	30	0	24	0	do do new and in good order.
Lockmaster's do Lock No. 12......	Stone.	30	8	22	4	do do do
Lock laborer's do do	do	32	7	21	7	do do do
Lockmaster's do Lock No. 13......	do	30	8	22	4	do do do
Lock laborer's do do	do	31	6	21	6	do do do
House for keeper of St. Timothy Bridge..	Wood on stone foundation.	32	0	24	0	do do in tolerably good order.
For keeper of 1st Ferry above do ..	Wood.	35	0	15	0	do do old.
Do 2nd do do ..	do	28	0	17	0	do old but roof newly shingled.
Lockmaster's house, Lock No. 14	Stone.	30	8	22	4	do shingled, in good order.
Lock laborer's do do	do	32	6	21	4	do do do
House for Supt. near Lock No. 9.....	do	38	0	33	0	One and a half stories, do do

APPENDIX No. 4.

(No. 25.)

REPORT BY D. A. McDONELL, SUPERINTENDENT.

DESCRIPTION OF THE WORKS ON THE CORNWALL CANAL.

F. Braun, Esquire, Cornwall, 30th June, 1867.
Sec'y Dept. Public Works, Ottawa.

Sir,—I have the honor to submit the following report on the Cornwall Canal, as requested by your circular, No. 62,927, of the 15th instant :—

This Canal was placed under my charge on the 1st of September, 1849, up to which time I fulfilled the duties of Superintendent on the Beauharnois Canal, since March, 1846.

The Cornwall Canal overcomes the Long Sault Rapids, and extends from the head of Lake St. Francis, at the Town of Cornwall, up to Dickinson's Landing, at the head of the Rapids.

Its dimensions are as follow, viz. :

Length	11½ miles.
Bottom width	100 feet.
Width at surface of water	150 "
Depth of water in Canal	10 "
Depth of water on Lock Sills	9 "
Number of Locks	7
Size of Locks	200 × 55 feet.
Total rise of Lockage	48 feet.

SITUATION OF THE CANAL.

The Canal follows the windings of the north bank, along the water's margin, of the St. Lawrence, except in two places, where it is cut across points of land. The first of these points, which is about half a mile in length, is at the lower terminus of the Canal, opposite the Town of Cornwall, and the second, of the same length, is at a place called Robinson's Point, two miles farther up.

DEPTH OF CUTTING, IN TRUNK OF CANAL.

On the north side of the Canal, the natural surface of the ground varies from about 14 to 15 feet in height, above the water surface of the Canal, from the Town of Cornwall up to the foot of the Long Sault, at Brown's Bay, a distance of 8½ miles; from Brown's Bay to Dickinson's Landing, a distance of 2 miles, it varies from 35 to 40 feet in height above the water level of the Canal. The deepest cutting along the entire line of Canal is 65 feet, and is situated about 1½ miles below the Guard Lock, near Dickinson's Landing. The average depth of the cutting varies from 25 feet on the north side to nothing on the south side of the Canal prism.

All the cuttings are through clay, gravel and sand.

SOUTH EMBANKMENT, OR TOWING-PATH.

The south side of the Canal consists of an artificial embankment of clay and gravel, resting, chiefly, upon the bed of the river, except at the two points before described. It is generally protected on the river side with stones from the excavation of the canal. When this embankment was originally constructed, it was 4 feet above the water surface of the Canal, but at the present time it has settled down in most places to 2 feet above that level. It has been partly raised from year to year at various points, otherwise several portions of it would have settled below the water level of the Canal.

SLOPE WALL.

The face of this embankment, along the trunk of the Canal, is lined with a dry wall of stone, of which the base is placed 2½ feet below, and the top 2 feet above, the level of the water.

NORTH SIDE.

On the north side of the Canal, stone has been placed only where embankments have been constructed, and where cuts occur.

SWING BRIDGE, AND ROAD TUNNELS.

The Canal is traversed by one swing bridge, at the Town of Cornwall, and by 4 road tunnels, one of which is near the lower end of the Canal, the next at Robinson's Point, 2½ miles further up, another at Mille Roche, 4 miles above Cornwall, and the fourth at Moulinette, 1½ miles further.

The swing bridge is of timber frame-work, fastened with iron, and resting on abutments of cut stone masonry, 56½ feet apart. The width of the roadway between the side trusses of the bridge is 10 feet.

The road tunnels are constructed of cut stone masonry; the side walls are about 12 feet apart, and 6 feet in height—the versed sine of the arch, which connects the side walls, is 4 feet; the top of the arch stones is about 18 inches below the bottom of the Canal.

LOCKS.

The locks, of which there are seven, are numbered from 15 to 21, inclusive: the three first, at the lower end, or Nos. 15, 16 and 17, are about 200 feet apart; the fourth, or No. 18, is 1½ miles above the foot of the Canal; the fifth, or No. 19, is 1¼ miles farther; the sixth, or No. 20, is just below the Village of Mille-Roches, or 2 miles above the latter; the seventh, which is the Guard Lock, No. 21, is 5½ miles above Mille-Roches, or 1 mile below Dickinson's Landing.

All the locks are built of heavy coursed cut stone masonry, resting on a foundation of timber, except at the Guard Lock, where the chamber of the lock between the gates is lined with close crib work, filled with earth and stone, and banked on the outside with earth.

The bottom of the lock chambers and recesses is covered with timber and planked, pine plank being used in the former, and elm in the latter.

The mitre sills of the locks rest upon the timber foundation to which they are bolted.

In the masonry of each of the locks, there is a bead course which projects about 3 inches beyond the face of the walls, and is intended as a water guage. The water must be flush with the bottom of this bead course in order to have a depth of 9 feet on the sills.

When vessels have a full draft of 9 feet, this depth must be increased at the time of locking to 1 or 2 inches, to prevent injury to the sills.

LOCK GATES.

The lock gates, until 1854, consisted of horizontal oak bars, placed about one foot apart, covered with a 3-inch vertical sheeting of pine plank, tongued and grooved, the whole connected with the quoin-posts of oak, 18 inches in diameter, and the mitre posts by means of iron T and L plates.

In the leaf of each gate there were two valves, each of which was opened by a lifting screw.

Since 1854 the lock gates have been constructed of solid timbers, placed horizontally upon each other, bolted together with 6 vertical tie rods, 2 inches in diameter, passing through the centre of the timbers. The top timber, the timber above and that below the valves, are of oak, the remainder are of pine. At the heel of each gate, where it works in the hollow quoin, there is a knee of tamarack, built of two pieces, which are bolted together, and are also bolted to the top bar of the gate. The head of this knee turns in a wrought-iron collar, which is keyed to a wrought-iron anchor bolted to the masonry.

There are four valves in each gate: each pair of valves is opened or closed by means of a lifting screw.

The roller under each gate runs on a convex cast-iron segment, 4 inches thick in the centre, and 2 inches thick at the sides. This segment rests upon the recess flooring, to which it is bolted. The pivot-sockets of the gates also rest upon the flooring of the recesses.

WEIRS.

At each of the Locks Nos. 18, 19, 20 and 21, a regulating weir has been constructed for the purpose of furnishing the Canal with the requisite supply of water. In addition to these regulating weirs, there is a weir at Lock No. 17, and another at No. 20, built by the Government for the special purpose of supplying the water-power leased for the use of the mills and factories at each of these stations.

All these weirs are situated between the locks and the north bank of the Canal. They are built of heavy coursed limestone, the wings being of rock-work, and the breast-wall of hammer-dressed masonry.

At Locks Nos. 18, 19 and 20 there are four sluices of 3×3, and at the Guard Lock, No. 21, there are 6 sluices of 4×3, for the passage of the water through the breast walls.

The supply weirs at Locks Nos. 17 and 20 are provided with six sluices, each 4×3 feet.

The sluices of the regulating weirs at Locks Nos. 18, 19 and 20 are closed by means of sliding gates, worked partly by levers and partly by lifting screws. The supply weirs at Locks Nos. 17 and 20, and the regulating weirs at the Guard Lock, are provided with gates that revolve on excentric shafts of 3-inch iron.

WOODEN WEIRS CONSTRUCTED BY MILL OWNERS.

Between Locks Nos. 17 and 18 there are two wooden weirs, with four sluices each, of 3×4 feet. These are provided with sliding gates, worked by means of a rack and lever. These weirs have been constructed at the expense of the lessees of the water-power, for the supply of their mills on the south side of the Canal.

WATER–POWER.

The quantity of water leased for the use of mills and manufactories, on the entire line of Canal, is 47 run of stone, of 10-horse power each, of which 37 are between Locks Nos. 17 and 18, and 10 between Locks Nos. 20 and 21.

WHARVES AND PIERS.

On the north side, at each end of the Canal, and opposite the Town of Cornwall, there are wharves and piers for the convenience of vessels.

At the lower terminus, the wharf which commences at the end of the east wing of the entrance lock, continues downwards a distance of 300 feet, for a breadth of 10 feet. At the end of this wharf there is a pier, 300 feet in length by 18 feet in breadth, sunk in a depth of 12 feet of water.

The wharf at Cornwall is 350 feet in length by 12 feet in breadth.

At Dickinson's Landing, or at the upper entrance, there is a basin about one mile above the Guard Lock. This basin is 350 feet in length and 100 feet in width, and 10 feet in depth. It is lined throughout with a wharf 12 feet in width. The wharfing continues a distance of 200 feet, and a breadth of 12 feet, from the basin to the pier at Dickinson's Landing. This pier consists of 22 cribs, placed 22 feet apart, connected at the top by three stringers, covered over with plank, and is 900 feet long and 12 feet wide.

All the wharves and piers consist of 12-inch pine timber crib-work, filled with stone.

MILLS.

Between Locks Nos. 17 and 18 there is one stone grist mill in operation, and one factory of stone and brick in course of construction, on the north side of the Canal. There are two grist mills, one of wood, and one of stone, and one saw mill, of wood, on the south side.

At Lock No. 20 there is one grist and one saw mill, of wood, on the north side of the lock grounds.

All these mills belong to private individuals, and are supplied with water-power from the Canal.

LOCK-HOUSES, &C.

The number of buildings, constructed by the Government, for the working of the Canal, is 14. They are situated, and may be described, as follows, viz.:—

Three Lock laborers' dwellings on the south side of the Canal, opposite Locks Nos. 15, 16 and 17, for the use of the nine men who attend these locks. Each dwelling measures...	51×23½	feet.
One Lockmaster's dwelling, on the south side of Lock No. 16...	31×23	"
One Collector's dwelling, on the north side of Lock No. 17...	38×26½	"
One Superintendent's dwelling, on the south side, between Locks Nos. 17 and 18....................................	32×31	"
Four Lock laborers' dwellings, each of which is situated on the south side of Locks Nos. 18, 19, 20 and 21, for the use of the twelve men who attend these locks, and measuring each	51×23½	"
One Lockmaster's dwelling, on the north side of Lock No. 18...	31×23	"
Two Lockmasters' dwellings, on the south side of Locks Nos. 19 and 20..	31×23	"
One Lockmaster's dwelling, on the north side of Guard Lock No. 21..	38×26½	"

All these buildings are one story in height, and are constructed of brick, resting on a stone foundation. With the exception of the Collector's and Superintendent's dwellings, which have roofs covered with tin and sheet-iron, the remainder have roofs covered with shingles.

LIGHT HOUSE.

At the upper end of the south bank of the Canal there is a small Light-house, of 12×12 at base, and 5×5 at top, and 15 feet in height, with a lantern at top, and a single light and reflector, facing westward, to guide vessels into the Canal.

LAND.

The limits of the land purchased for the use of the Canal are marked by monuments of cut-stone. The portion not occupied by the Canal prism and embankment is all required for Canal purposes, for the repairs of the embankment or otherwise.

CONDITION OF THE WORKS.

EMBANKMENTS.

The south embankment, or towing path of the Canal, is generally safe, although it shews a few indications of slight leakage, and is occasionally liable to slides, which have hitherto been repaired at small expense. The embankment having settled throughout, as already stated, has been partly raised during the last five years; two miles yet require to be raised from 12 to 24 inches.

The portions of artificial embankment on the north side of the Canal are in good order, but 500 feet of the bank below Lock No. 18 requires to be raised 18 inches.

SLOPE WALLS.

The walls on the inner slopes of the Canal require slight repairs.

ROAD TUNNELS AND SWING BRIDGE.

The road tunnels underneath the Canal are generally passable for foot travellers and carriages, excepting the tunnel at the foot of the Canal, the roadway of which is covered throughout the summer season with from 18 to 24 inches of water and sand, and from 6 to 15 feet of water and ice in winter. The roadways under the other tunnels have to be cleaned out once a month. The Swing Bridge at the town of Cornwall, was rebuilt last spring.

LOCKS.

The locks are in a bad state of repair; the planking of the timber foundation in the lock chambers and recesses requires to be partly renewed; the mitre sills in many cases have been injured, more or less, by vessels striking the same. The walls must be thoroughly pointed and grouted.

LOCK GATES.

The gates are only in need of slight repairs. In case of any accident occurring to the present gates there is one set (4 leaves) of spare gates for the Guard Lock, two pairs of upper gates, and two pairs of lower gates, adapted to either of the six lift locks.

WEIRS.

The six weirs constructed by Government are in tolerably good order, but require slight repairs.

The two weirs constructed by the lessees of water-power, on the south side of the Canal, opposite the town of Cornwall, between Locks Nos. 17 and 18, are very unsafe, particularly the one supplying the grist mill of Mr. Bethune and the saw mill of Mr. Adams. Both of these weirs should be constructed of substantial masonry, with revolving sluice wickets.

WHARVES AND PIERS.

The superstructure of all the wharves and piers, excepting 350 feet at the lower entrance, and 550 feet at the upper entrance of the Canal, are in a dangerous condition, and require to be renewed immediately. The total length of wharves and piers requiring a new superstructure and additional piers, is 1,600 feet. The superstructure of the wooden wings of the Swing Bridge abutments at Cornwall must also be rebuilt, being in a decayed condition.

LOCK HOUSES, &C.

The 13 dwellings of the Collector, Lockmasters and Lock laborers are in a fair condition, excepting the Lockmaster's house at the Guard Lock, which was constructed 24 years ago, and requires extensive repairs.

The Light House, at the upper end of the Canal, is in good order, having been repaired and painted last May.

The Superintendent's dwelling, from its constant exposure to the periodical overflowing of the St. Lawrence, in the lower portion of the building, where water has risen from 2 to 4½ feet above the floor of the cellar kitchen, requires to be rebuilt. The walls of the building are only one brick in thickness, and are cracked in several places, and the roof is in a leaky condition.

I have the honor to be, Sir,

Your obedient servant,

D. A. McDONELL,
Superintendent.

APPENDIX No. 5.

(No. 129.)

REPORT BY ISAAC N. ROSE, SUPERINTENDENT.

DESCRIPTION OF THE WORKS ON THE WILLIAMSBURGH, RAPIDE PLAT AND GALOPS CANALS.

MORRISBURGH, 1st July, 1867.

F. BRAUN, Esquire,
Sec'y. Dept. Public Works, Ottawa.

SIR,—I have the honor to acknowledge the receipt of your circular letter, dated the 15th ult., and of the explanatory letter which accompanied it, desiring a detailed description of the works under my charge.

In reply, I beg respectfully to submit that the principal works entrusted to my management, consist of the Canals and Buoy service between Prescott and Dickinson's Landing. These Canals are in three divisions: the first of which, in ascending order, is known by the appellation of "Farran's Point Canal;" the second by that of "Rapide Plat Canal;" the third comprises the Iroquois and Galops sections, connected by what is termed the "Junction Canal."

Collectively, these three divisions are known as the Williamsburgh Canals, and embrace a distance of 30 miles—that is, from the foot of Farran's Point Canal to the head of the Galops Rapids. They were first opened for traffic in 1848. The prism of all of them is 50 feet wide at bottom, with slide slopes of two horizontal to one vertical, except in a rock cut, one hundred rods in length, on the Iroquois section, where the width at surface is only 60 feet.

The Canals having been formed along the margin of the River St. Lawrence, there are, at many places, large and deep bays included by the outer embankment; but there is no land between the river and the outer embankment, except at Point Iroquois, where the Canal has been formed by excavation, leaving a strip of land on the south of the Canal, on which a number of persons reside. At many places, on the north side, strips of land have been acquired for Canal purposes.

The locks throughout are 200 feet long between the gates, and 45 feet wide between the quoins. The mitre sills, at the lower end of the lift locks, and at both ends of the Guard Locks, are secured on transverse timber platforms, placed nearly on a level with the chamber floors. Those at the upper end of the lift locks are placed on breast walls of masonry, carried up to the height of the bottom of the upper reach. All the mitre sills are 9 feet under the surface water level of the respective reaches. The locks are constructed of a substantial class of limestone masonry, the front portions of which are laid in hydraulic mortar, and the backing in quick lime mortar.

The quoins and recesses for gates are of cut-stone, and the face of the chamber walls of hammer-dressed stone, laid in regular courses. Well holes have been constructed in the recess walls, for the insertion of chains, used to open and close the gates, by means of crabs placed on the coping of the locks. The lock-gates consist of a series of timbers secured to each other by dowels and through bolts, and are known as "solid timber gates," in contradistinction to "framed gates." Cast-iron quadrant valves are inserted in the gates, and regulated by screws on the top, for the passage of water.

All the locks are formed, at the base, of timber, laid transversely, which in the chambers are covered with two courses of plank, with the exception of Lock No. 25, at Iroquois, where the foundation is of rock.

FARRAN'S POINT CANAL

Is three-fourths of a mile long, and is situated in the Township of Osnabruck, County of Stormont. At the upper end, on the south or river side, there are about 300 feet of crib and pier-work, the extremity of which forms an ice-breaker; while on the north side the pier-work extends 450 feet, and forms a wharf. Near the lower entrance there is a lock of about 4 feet lift, having a swing bridge attached to it. The pier-work on the south side extends, obliquely, downward about 175 feet, giving an outward direction to the current, and acting as an ice-breaker; the pier-work on the north side is about 740 feet long, forming a wharf. On the north side of the lock there is a piece of land belonging to the Canal, on which there is a Keeper's house, 22×30 feet, built of stone; there being on the south side two stone houses for the lockmen, under one roof, forming a building 22×32 feet. At this place, a grist mill, a carding mill and a shingle mill, have been in operation for several years. The water privilege, I believe, was granted in lieu of the land taken for the Canal.

RAPIDE PLAT CANAL

Is four miles in length, and is situated in the Townships of Williamsburgh and Matilda, County of Dundas. There is a Guard Lock near the upper end, at which there is a head of water, varying from 1 to 3 feet, but at seasons of low water the reaches above and below the lock are on the same level. Here the south or river pier extends upwards of 275 feet, its extremity forming an ice-breaker, while the pier on the land side is about 450 feet long, and is used as a wharf. The Keeper and Lockmen's houses are of stone, and both on the north side of the Canal; the former 22×30 feet, the latter, a double house, 22×32 feet. The lock at the outlet of this Canal has a lift of 9 feet at the ordinary height of the river, and has a swing bridge for crossing it. The south pier extends downwards, about 50 feet, and is built of stone, while the north pier is formed of 400 feet of crib-work, covered with plank, and used for wharfing purposes.

The houses are of the same material, form of construction and dimensions, as at the upper end, but the lockmen's house is on the south side of the Canal. There is also a wooden store-house, 24×36 feet, at the wharf, for storing Canal property. A short distance above the lock, on the north side, a weir (of stone) and head gates have been constructed, for the supply of water to the mill privilege, which, on this section of the Canal, is leased. There is power fully equal to eight run of stones, used for the purpose of driving a grist mill, saw mill, and cloth factory. The outer embankment, for about one-third of the distance between the guard and lift locks, consists of crib-work, carried to the height of the river surface, the banks for the remainder of the distance having been formed of material excavated from the prism of the Canal.

The third division of the Williamsburgh Canals consists of Point Iroquois Canal, 1⅝ mile, Junction Canal, 4 miles, and Galops Canal, 2 miles in length; formerly in two divisions, now united, by joining the two, in order to overcome a strong current, and increase the depth of water.

The pier, on the south side of the entrance at Iroquois, is about 50 feet long, and built of stone; that on the north side is about 340 feet in length, composed of timber, filled up to the surface with stone, and forms a wharf. The lock, at this place, has a lift of from 4 to 6 feet, according to the height of the river, the reach above being maintained at a uniform height. There is a bridge across the lock, over which there is a large amount of travel, owing to the residence of persons on the property being cut off by the Canal. A weir and head gates have been constructed here also, on the north side, a short distance above the lock, to supply water-power leased for four run of stone. This power is used for driving a grist mill.

On the south side, above the lock, there is a saw mill and flax mill, which, together, lease water sufficient to drive eight run of stone. The head gates for these latter mills were built, and are maintained, by the proprietors.

There are two store-houses; the one 22×30 feet; the other, 22×32 feet; a double house for Lockmaster and laborers respectively; they are all built on Canal property, and on the north side of the lock. There is also a wooden building, 24×36 feet, used for storing Canal property, at a distance of about 200 rods above the lock. The Canal has been formed through rock cutting, for a distance of about 100 rods, along the sides of which a boom has been placed, to prevent vessels from being injured by contact with the sharp points of the rock. The lock, at the foot of the Galops Rapids or head of the Junction Canal, has a lift of from 5 to 6 feet, and is crossed by a swing bridge. On the north side of it there is a Lockmaster's house, and on the south side a laborers' house, of the same construction and material as at the foot of this division. At a distance of about 700 feet below this lock, the outer side of the river embankment is formed of pier-work, which serves the purpose of a wharf; and on the north side of the Canal, a wharf, 250 feet long, has been constructed.

On the north side, above the lock, a weir and head gates supply water-power, which is used for a starch factory, saw mill, grist mill, and shingle factory. The power granted is sufficient to drive twelve run of ordinary mill stone, 4 of which are leased by the Department, the remaining eight run having been granted to the original proprietors, in lieu of land damages.

There is a wooden store-house, 16×24 feet, near the lock, on Canal property.

The Guard Lock at the upper entrance of the Galops Canal is so placed that, at periods of low water, there is no head on the gates, the reach below and the river above being on the same level. On the north side of the lock there are weir and head gates, to supply water to the mills on this Canal.

The Lockmaster's house is a stone building, 22×30 feet, while that for the lock laborers is a wooden one, 24×32 feet, both on the north side, and on Canal property.

The South or River pier, at the upper entrance, is about 450 feet long, the extremity forming an ice breaker; that on the land side is 650 feet long.

Iroquois Canal and the lower half of the Junction are in the Township of Matilda, County of Dundas; the upper half of the Junction and the Galops Canal are in the Township of Edwardsburgh, County of Grenville.

The locks throughout are in good condition, but the walls generally require repointing. The lock gates are in a fair state of repair, but there are no spare gates at present on hand. Of the four bridges mentioned above, three are so decayed as to be rendered useless, while the fourth, at Iroquois, is in such a dangerous state that a new structure is urgently required.

The inside face of the embankment has been lined, nearly throughout, with stone, and the outside, or river face of the bank, is also well protected with a rip-rap wall of stone.

That portion of the pier-work above the water surface, at the respective inlets of the several Canals, is generally in a decayed state, and must, ere long, be rebuilt.

The booms along the sides of the rock-cut, in the Iroquois section of Canal, have been so long in use that they are now completely worn out; but, instead of renewing them, it might be well to draw off the water and trim down the sides of the rock. The lock-houses at the different stations are in a good state of repair, except the roofs, which require to be overhauled and reshingled.

The buoys and land-beacons, for marking out the deep water channels at the various bends and prominent points in the river, are all in serviceable order.

The floating craft, consisting of Canal scows and Buoy boats, are all but worn out.

Trusting that the foregoing supplies all the information called for by your letter,

I have the honor to be, Sir,

Your obedient servant,

ISAAC N. ROSE,

Superintendent, Williamsburgh Canals.

APPENDIX No. 6.

(No. 248.)

REPORTS BY S. D. WOODRUFF, SUPERINTENDENT.

DESCRIPTION OF THE WORKS ON THE WELLAND CANAL.

Welland Canal Office,
St. Catharines, July 8, 1867.

F. Braun, Esquire,
Sec'y. Dept. Public Works, Ottawa.

Sir,—I have the honor to report, in compliance with the instructions conveyed to me in your letter No. 62,923 :—

The main line of this Canal extends from Lake Ontario (its lower entrance) to Lake Erie, a distance of 27⅕ miles, and overcomes the interruptions to the navigation caused by the Rapids in the Niagara River, and the Falls of Niagara, with a rise of 324¾ feet from lake to lake.

It passes through the Counties of Lincoln and Welland, and the Townships of Grantham, Louth, Thorold, Crowland and Humberstone. The Canal derives its supply from the Grand River, but, in consequence of the supply from that source decreasing, it was decided to deepen the summit level, between Allanburgh and Port Colborne, sufficient to admit of the supply for the Canal being taken direct from Lake Erie.

Owing to the insufficiency of the Grand River, as a supply, becoming every year more and more apparent, the progress made with sinking this level approaches very near completion. But a comparative small amount is required to clean out the bottom and construct the other works connected with the adoption of this level.

Upon this line of Canal there are 27 lift locks, and three guard locks, all constructed of durable stone masonry, except a guard lock at Port Robinson—this is of wood and rubble masonry, and 27 stone waste weirs.

A stone acqueduct, 316 feet in length by 45 feet in width, over the River Welland.

DESCRIPTION OF LOCKS, &C.

Locks No. 1, at Port Dalhousie (Lake Ontario), and No. 2, at St. Catherines, are 200 feet in length between the quoins, and 45 feet in width. Lock No. 2 is situated 3½ miles above the lower entrance of the Canal.

From Lock No. 2 to Lock No. 25, inclusive, at Thorold, a distance of 5⅗ miles, there are 23 locks of 150 feet between the quoins, by 26½ feet in width, each from 12½ to 14 feet lift.

From thence it is 3⅕ miles to the Allanburgh Lock. This lock has 15¼ feet lift, otherwise it is of the same dimensions as those last mentioned.

The guard locks above the Thorold and Allanburgh locks are 45 feet in width. Between Allanburgh and Port Robinson, a distance of 2¾ miles, the Canal passes through a high ridge of land, near 1¾ miles, called the "Deep Cut." A large portion of this Cut is 60 feet in depth ; the depth below the natural surface is, however, only 45 feet, the additional 15 feet consisting of material which was taken from the Cut when the channel was first excavated by the "Welland Canal Company."

From Port Robinson to the acqueduct it is 3¾ miles. The Canal, for much of the way, skirts along the Welland River ; thence to Port Colborne, 8⅖ miles, it is for half of the way through deep cutting, and for 1¾ miles of it, north of Port Colborne Lock, is in heavy rock cutting.

The lock at Port Colborne is 230 feet in length between the quoins and 45 feet in width, with a lift of 8 feet above the lake, to the summit level.

The Canal is regulated for the passage of vessels with 10 feet draft of water, and from 142 to 145 feet in length, according to the shape of bow and stern, and 26½ feet in breadth.

The Canal has two entrances from Lake Erie; that on the main line at Port Colborne, and by the Feeder route at Port Maitland, 17 miles apart; the former about 20 miles west from Buffalo, and the latter 37 miles. The Port Maitland entrance has an advantage in spring over the Port Colborne, in being clear of ice several days before either that or Buffalo.

The main line of this Canal connects with the Port Maitland or Feeder route at the Junction (20 miles above Lake Ontario), where there is a stone lock of 150 feet in length between the quoins, by 26½ feet in width. This lock is not required while the Canal is maintained on the present Grand River level; but when Lake Erie is adopted as the Main Canal Feeder, this lock will be available, and have 8 feet lift. The route from thence by the Feeder is through parts of the Counties of Welland and Haldimand, and the Townships of Crowland, Humberstone, Wainfleet, Moulton and Sherbrooke, to Broad Creek, 5 miles below Dunville; and thence by a branch Canal to the Grand River and Port Maitland. There has been constructed, near the river, on this branch Canal, a stone lock of 8½ feet lift, 185 feet between the quoins, by 45 feet in width.

Port Maitland is situate at the mouth of the Grand River, 18¾ miles above the junction, 38¾ miles above Lake Ontario, and 5 miles below Dunnville.

Dunnville is situated on the Grand River, 41.1 miles above Lake Ontario, where the feeder to the Canal is formed, through raising the water of the river 9 feet. By the construction of a timber dam, across the stream, 600 feet in length, and an earthen embankment (protected with docking timbers) over the marsh, extending to the high land on the southerly side of the river, 1,780 feet in length.

Through the raising of the water by this dam, slack water navigation is formed 16 miles up the river, to the Village of Cayuga.

The flow of water into the feeder is regulated by the construction of a lock, of wood and stone, at Dunnville, with two pairs of gates, 200 feet between them, by 45 feet in width. During high water in the river, it is necessary to work these gates in the ordinary way of a lift lock. But when the water is at its regulated height, the gates are thrown open, and the water allowed to pass through uninterruptedly. The flood water of the Grand River is regulated by the overflow of the dam, and the discharge of two larger stone waste weirs, constructed on the southerly side of the river, each with 150 feet water way, and suitable discharging sluices.

With the construction of the aqueduct, over the Welland River, the navigation of the stream, at that point, is rendered impassable. But this obstruction is removed by the construction of stone locks, of 17 feet lift, with 9⅚ feet depth of water on the sills, and 150 feet in length between the quoins, with 26½ feet in breadth, near the aqueduct and at Port Robinson, through which and the Canal, between these points, the navigation of that stream is eastward. 26 swing bridges, of wood, have been constructed, to restore the travel upon the public roads, which has been cut off. In making the Canal, 21 of these are upon the main line, and 5 upon the feeder; and several tow-path bridges, culverts, &c., upwards of 3 miles in length, over deep water, creeks, &c. The principal one is the floating tow-path, above Lock No. 1. It is 1½ miles long.

The Canal below Thorold has generally a bottom width of 70 feet. From Thorold to Allanburgh, the bottom width, for a considerable way, is but 26 feet, with passing places. Above Allanburgh it is 50 feet bottom width at the level of the mitre sill of the old lock at Port Colborne, and through the rock cut it is 58 feet in width, with vertical sides.

The feeder has but 26 feet width of bottom, with passing places at half a mile distant, with 8½ feet depth of water, and vessels pass drawing 8 feet.

The harbor of Port Dalhousie is 200 feet in width, between the piers, and is 2,887 feet long, from the outer end of the west pier to the lock. The basin below the lock is, for several hundred feet, 300 feet in width, and may be increased to over double its capacity, by further opening, with about 9 feet excavation.

The harbor of Port Colborne, in connection with the basin formed between the piers and the lock is, from the outer end of the west pier to the lock, 3,843 feet in length. The width between the piers, at the narrow or inner part, is near 90 feet. The basin is 350 feet in width, and averages 890 feet in length.

The harbor at Port Maitland is formed by extending two lines of piers into Lake Erie, at the mouth of the Grand River. The west pier is about 1,500 feet in length. The channel between the piers is 180 feet.

I have the honor to be, Sir,

Your obedient servant,

S. D. WOODRUFF,
Superintendent.

DESCRIPTION OF THE WORKS ON THE BURLINGTON BAY CANAL.

(No. 246.)

WELLAND CANAL OFFICE,
St. Catharines, July 8, 1867.

F. BRAUN, Esquire,
Sec'y Dept. Public Works, Ottawa.

SIR,—I have the honor, in compliance with the instructions conveyed to me in your letter, No. 62,923, to report in reference to the works at the Burlington Bay Canal.

This Canal is situated in the County of Halton, and is formed by cutting through the Burlington Beach, a low piece of land which separates Lake Ontario from Burlington Bay. By protecting the sides with walls of timber, and dredging out a channel through it, communication is had with the City of Hamilton and Town of Dundas.

The north wall, or pier, is 2,307 feet in length, and the south one 2,710 feet, and generally 20 feet in width. The easterly part of the south pier is, however, where it is much exposed to the seas of the lake, increased to 40 feet width.

These piers are situated 103 feet apart at their inner end, and 174 feet at their outer end. They are generally in good repair, with sufficient depth between them.

I have the honor to be, Sir,

Your obedient servant,

S. D. WOODRUFF,
Superintendent.

* * *

APPENDIX No. 7.

(No. 237.)

REPORT BY JAMES D. SLATER, SUPERINTENDENT.

DESCRIPTION OF THE WORKS ON THE RIDEAU CANAL.

F. Braun, Esquire, Ottawa, July 1, 1867.
Sec'y Dept. Public Works, Ottawa.

Sir,—In accordance with the instructions in your circular, No. 62,925, I beg to submit a report giving a description of the works under my charge, as they exist at the present time.

The Rideau Canal was constructed for military purposes, by the Imperial Government, from 1826 to 1832, connecting the navigation of Lake Ontario, by way of the Ottawa, with the St. Lawrence River. This Canal commences in the City of Ottawa, about one mile above the Rideau River, at its confluence with the Ottawa, and enters the Rideau at Hogsback, five and a half miles from Ottawa, thence following the course of the Rideau River to the Rideau Lake, which is the summit level, thence downward through a chain of lakes and the Cataraqui River to Kingston, a distance of 126¼ miles in length.

The navigation is formed chiefly by means of twenty-four dams, eleven of which are stone, and thirteen of timber and clay, constructed where necessary to raise the water to a proper level.

The following is a description of the several works commencing at the City of Ottawa:—

To save repetition at the different stations where no remarks are made, it is to be considered that the works described are in a tolerable state of repair.

OTTAWA.

The works here are eight combined locks, raising the water 82 feet; one cut-stone arched bridge, with 56½ feet span and 24 feet wide; a basin, or lay-by, covering 6½ acres. From this basin a waste weir or by-wash, as it is called, for discharging the surplus water, runs transversly through a considerable portion of the Lower Town to the Rideau River. Applications, by the public, have been made to get this ditch covered in, on account of sanitary reasons. There was formerly a wooden lock where this by-wash leaves the basin. The lower gates and chamber walls are gone; new upper gates have been put in, but the wooden pier-work to which the gates are hung is old and decayed. Some of the stones of which the locks are built are not very good. They are apt to spall and crumble. The same remarks apply to the stones of the bridge.

The refuse from the mills at the Chaudière is injuring the navigation below the locks, and this trouble is increasing yearly. Proceeding from the basin, the next important work is the "deep cut," being 43 chains in length, and averaging from 15 to 27 feet cutting. At the head of the "deep cut," there is a dam, 230 feet long and 20 feet high, across what is called the natural gully; this is made use of for the Canal, about 140 chains in length. At the upper end of this gully a swing bridge was built last winter, connected with the shores by earth embankments; thence Mutchmor's cut is passed, which is through a hard gravel hill to Dow's swamp, about 80 acres in extent. The water has been raised by dams on each side in places 33 and 20 feet high. In this lake, as it may be termed, a boom has been stretched to keep floodwood from the navigable channel, and to protect the bank from washing; thence through a short cut to

HARTWELL'S,

Four and a half miles above Ottawa. There are two combined locks at this station, a cut-stone waste weir, through and over which the surplus water runs to the Rideau River. The stones of the waste weir have been disturbed by the frost, but otherwise the masonry of this and the lock is in a good state of repair. A wooden apron and bridge below the waste weir are decayed and dilapidated. Above this lock there is a cut a mile in length, which is about 30 feet above the Rideau, on a side hill. Slips have occurred here in the bed of an old creek, which have been troublesome and expensive to repair.

HOGSBACK.

At five and a half miles above Ottawa, the artificial Canal joins the Rideau River, the waters of which are raised here by means of an earth dam 50 feet high. At the end of this dam there is a wooden sluice-way or bulkhead, with five openings of 20 feet each; between this and the east shore there is a channel about 150 feet wide, over which the surplus water runs, in ordinary states of the water.

There are two locks combined; the upper one, however, is only used during the time the water is above navigable level. The masonry of the west wall, in the lower lock, has bulged out the whole length of the chamber. It looks dangerous, and may fail at any time, but as it has been in this state for many years, it may last for some time longer.

Respecting the works at this important station, and their future improvements, they have been very expensive and troublesome. Several failures of the dam have occurred; the last in 1862. Before very long the bulkhead will have to be renewed; it is now almost in ruins; it has been injured severely every year by the ice and floodwood. The constant tremulous motion or shaking, caused by such immense bodies of water that have to pass through these sluices during floods, create leaks in the dam; it has been saved from destruction by having large reserves of gravel and stone on hand. Whenever it becomes necessary to rebuild the bulkhead, which will be at no remote period, I would recommend that a flat dam should be made in its place, and that a channel, 6 or 8 feet deep, and 60 feet wide, should be blasted in the present back channel, and the bulkhead be made there, so that all the ice and floodwood could be sent over the flat dam, by means of a boom.

No boom can be placed to protect the present bulkhead, on account of the depth of water, and the current over the back channel.

Above the locks, about 1½ miles, at the head of the large bay where the river makes a turn, there have been two piers and a boom stretched, which catches most of the floodwood in ordinary times. Taking advantage of a favorable opportunity, it is made into what is called a moulinette, and conducted past the works.

From this station the Canal follows the Rideau River, a distance of 4 miles, to

BLACK RAPIDS.

There was formerly a curved stone waste weir dam at this station, but it was injured by floods in 1841. It was repaired, by building a timber crib-work and apron against it, which required considerable outlay every year to keep up, but in 1862 this was carried away by the flood, and the stone dam gave way.

A wooden flat pressure waste weir dam was built below the stone dam, which has given no further trouble since. There are two sluice-ways here, of about 20 feet openings each; one, built of wood, in 1862, the other of stone, which was built when the Canal was made. This latter is almost in ruins. A wooden frame-work had to be constructed between the walls to hold them up, and to regulate the water. There is one lock at this station. A new upper sill of stone has been built recently.

LONG ISLAND

Is 5¼ miles above Black Rapids. At this station there are three locks combined, which raise the water 27 feet. From the head of these locks, a fine curved stone retaining dam, about 350 feet long, and 29 feet high, supports an embankment; it is built across the bed of the river.

From the locks the river is divided into two channels, called the easterly and westerly branches, forming Long Island, which is about 3 miles in length. Long Island is connected, at the foot by embankments, with the stone dam at the head of the locks, in which embankments there is a timber dam, 280 feet long, and 30 feet high, filled with stones. In the timber dam, two sluices, 15 feet wide each, have been made.

The principal bulkhead, or sluice-way, is in the westerly channel, a little below the head of the island, at the Village of Manotick; it is constructed in the same manner as the one at Long Island, with four sluice openings, of 20 feet each. On each side of this structure mills are built, so that all the waters of the Rideau have to pass through these sluice-ways. In any future reconstruction here, a flat dam should be made in connection with the sluice-ways, so that floodwood and ice could be made to pass over.

Various structures have been made from time to time to protect the works: ice-breakers in front of the sluice-ways; a large pier and boom at the head of the island, to catch the floodwood; a guard dam in the easterly or navigable channel, for the safety of the works at the station; and an apron below the sluices, in the dam, at the foot of the island.

Formerly the waste weirs or sluice-ways were at the foot of the island, but they were built on earth foundations, and have been carried away several times. The present bulkhead is on a rock foundation, and on 20 feet higher ground.

LONG REACH.

The Canal now follows the Rideau River in an uninterrupted reach of 27 miles. Near Beckett's Landing, 20 miles above Long Island, a wooden truss bridge has been built this spring; it is 340 feet in length, has five spans, of 40 feet each, in the clear, supported by queen-post trusses, and one span of 38 feet, over which there is a swing bridge, together with a common wooden bridge, 240 feet in length, over a back channel of the river.

BURRITT'S RAPIDS,

Forty-two miles above Ottawa. The works at this station are: one lock, a cut of about a mile in length; a wooden swing bridge, with substantial cut-stone abutments; a wooden waste weir dam across the river, in which is an opening or sluice-way for stop-logs, 20 feet wide.

The wood work of the bridge has lately been renewed. The muskrats are very troublesome here; they make holes in the embankments, which caused a breach in 1861.

NICHOLSON'S

Is 3 miles above the last station, or 45 from Ottawa. There are two locks, detached, a rock-cut half a mile long, a curved stone waste weir dam across the river, and small sluices for regulating the water and passing saw-logs.

Over the upper lock a swing bridge has been built lately, at the cost of Mr. Andrews the owner of the Mills at this station, (by permission of the Government).

CLOWES

Is three quarters of a mile above the last station, with one lock, a fine curved waste weir dam of stone, across the river; sluice-way 24 feet wide, with cut-stone abutments.

MERRICKVILLE

Is 48 miles above Ottawa. At this station there is a fall of 25 feet, which is made available for milling purposes to a considerable extent. There are three locks, detached, with basins between, the walls of which are built of dressed stone; over the upper lock there is a swing bridge. Here a block house, or small fort, has been built, in which the Lockmaster resides; above the locks there is a rock cut, about a quarter of a mile in length, from the entrance of which, at right angles, an earth embankment is extended to the river, over which a wooden waste weir dam, 130 feet long, is built, with sluices at each end.

MAITLAND'S

Is 56 miles from Ottawa, and eight miles above Merrickville. There is one lock here, with a small lift, over which is a swing bridge; across the river there is a low wooden dam—formerly posts and logs, but now piers and logs—with a small sluice-way, and a short cut through the rock, above the locks.

At this station the water first fails, when it gets low. A considerable portion of the river finds its way through some low soft swales, about one and a half miles east of the lock, called the break ground,—and this trouble is increasing. Attempts were made by the late Ordnance to stop it, but the water made other channels for itself.

EDMONDS

Is 61 miles from Ottawa. There is one lock, a curved waste weir dam (of stone) across the river, a sluice-way, with cut-stone abutments, which failed lately; a wooden structure was put in between the walls to hold the stop-logs and regulate the water.

OLD SLYS

Is 1 mile above the last station. There are two locks combined; an earthen retaining dam, supported by a curved stone wall, extends from the head of the locks over the bed of the river; the water all passes through wooden sluices, at the easterly end of the dam. Over the upper lock a draw-bridge was built by the late Mr. Bates; it is now in very bad order, and difficult to work. At the foot of these locks the Brockville and Ottawa Railway passes over a high bridge, built on substantial stone abutments, which form the lower entrance to the locks.

SMITH'S FALLS

Is 1 mile above Old Slys, or 63 miles from Ottawa. The fall in the river at this place is 34 feet. There are here, as at Merrickville, a number of workshops of different descriptions—saw, shingle and stave mills: the owners thereof have been in the habit of letting the sawdust and refuse fall into the river, in consequence of which the navigation between Old Slys and Smith's Falls has been seriously impaired.

There are three locks at this station combined, and one detached; between these works there is a basin and short cut through rock. A flat dam, of wood, and a sluice from the basin, regulates the water. An embankment, supported by a curved wall, across the bed of the river, keeps the water in the basin. There is also a swing bridge over the middle lock of the combined locks.

All these works, with the retaining dams and embankments, are on shelly rock, through the fissures of which considerable leakage escapes, which, during low water, makes it impossible to keep the water in the basin to navigable level. This, however, does not cause much inconvenience, because the basin can be soon raised through the detached lock. The original waste weir dam was of posts and logs, but it failed in 1859, and was replaced by the flat pressure dam.

Many applications have been made by parties to rent or lease the stream caused by the leakage, but it has not been considered advisable to dispose of it, as it may at some time be found necessary to make an attempt to stop the leakage.

Opposite the head of the detached lock, the water is kept up by one of the old dams of posts and logs; it has served its purpose now as long as could be expected, and must soon be renewed.

POONAMALIE,

Or first rapid, is approached by a small cut through rock; it is 2 miles above Smith's Falls, and is the outlet of the Great Rideau Lake, the principal reservoir for the supply of navigation during the dry season; there is one lock here, and a cut, three-quarters of a mile in length, above, partly through earth and partly through rock. The outlet of the lake is crossed by a dam, formerly posts and logs; it was very leaky, but this is now built solid with stones and gravelled in front. A new bulkhead, or sluices, have lately been put in the dam to regulate the water, the dam staunched so as to retain the water up to spring level, which is 2½ feet above what is required for navigation. This is very important as respects the working of the Canal.

The lake is 19 miles long and 5 or 6 miles wide in one place. With this dam we can, in some measure, control the floods in the spring and retain water for the dry season. Lower Rideau Lake receives the waters of the Tay River, below Port Elmsley, and other smaller streams.

THE NARROWS

Are situated between Upper and Lower Rideau Lake, 84 miles from Ottawa. The waters of the Upper Rideau are raised about 4 feet. An earth dam, 750 feet long, averaging 6 feet high, extends across the lake from shore to shore, in which there is a wooden sluiceway to regulate the water. The lock enters directly into both lakes, so that the wing walls have to be protected by wooden piers. These works are exposed to storms, which sometimes damage them, and the lock silts up, which gives trouble in working the gates.

A swing bridge has been built over the lock this season, which will shorten the distance from Kingston to Perth, somewhat, so soon as the roads are made passable. A block house or small fort was built here similar to that at Merrickville.

The Upper Rideau Lake is the summit level, 402 feet 6 inches above the sea, raising 292½ feet from the foot of the locks at Ottawa, and thence descending 165 feet to the level of Lake Ontario. It receives the waters from a chain of lakes commencing in the Township of Bedford, entering the Upper Rideau Lake at the Village of Westport.

The above levels are copied from official documents of the late Ordnance Department, a copy of which is appended in a tabular form, which shows the distance between the stations; also, the levels and cost of the works at each.

There are other authorities which make the lockage of this Canal something less, but these discrepancies may arise from not assuming the same data for the starting point, as the water level in the Ottawa River varies considerably.

NEWBORO'.

A cutting of upwards of a mile in length, through rock, connects the waters running north towards Ottawa with the waters running south towards Kingston. A high queen-post truss bridge, 75 feet span, with stone abutments, recently constructed, crosses the cut opposite the Town of Newboro'. At the end of the cut there is one lock descending 9 feet 6 inches into Mud Lake. This lake receives the waters from a large number of lakes, which are principally situated in the Township of Bedford, the largest of which are Canoe and Devil Lakes, and a short distance below, at the Massisagua Mills, another cluster of lakes, the principal of which is Buck Lake, situated in the Townships of Bedford and Loughborough, discharge their waters into the Canal.

Passing from Mud Lake through Clear and Indian Lakes, a distance of 4½ miles, Chaffey's Station is reached.

CHAFFEY'S.

There is one lock and sluice-way here, with stone abutments. A short cut enters Openacon Lake, at the outlet of which is situated

DAVIS.

There is one lock here, an earth dam, 270 feet long, 16 feet high, and a wooden sluice-way. From thence through Sand Lake, Jones' Falls is reached.

In many of these lakes there are groups of rocky and wooded islands, which are much admired by tourists.

JONES' FALLS.

This important station is 98 miles from Ottawa and 28¼ miles from Kingston. At this place there are four locks, overcoming a lift of 60 feet—one detached and three combined. There is a fine curved dam, 300 feet long and 60 feet high, built with very large blocks of hammered stone, which supports an earth embankment. The sluice-way has been blasted through a deep rock cutting between the locks and the dam. The material used for the masonry of these works is a sand stone; some of the blocks in the locks have failed. Two mitre sills in the combined locks require rebuilding; they are very much out of repair. The wing walls of the upper basin lock, which extend 75 feet on each side at right angles, have been overhanging for a number of years, and last season a portion fell into the basin; these walls could not be rebuilt except at considerable expense, and also stopping navigation; further injury was prevented, and the damage repaired by placing an embankment of stones in front of the wall below water level. On account of the inverted arch of the chamber floor of these locks, large flat bottomed barges cannot pass with as large a cargo as in other parts of the Canal, but it would not be safe to tax the gates and sills with more head than they have at present, as in the combined locks the water is frequently drawn off below in addition to the lift.

WHITE FISH DAM.

The waters of these lakes formerly found their way to the Gananoqui River, through White-fish Creek, which is 3 miles below Jones' Falls. A dam, with a slide for saw-logs, and sluice-way to regulate the water, has been constructed here, through which the surplus waters pass; the water that passes this way does not return to the Canal again. This dam was considered of such importance by the late Ordnance that a man was kept for the purpose of watching it; it is leaky, and the works old and somewhat dilapidated.

In 1812, two brothers, named Haskins, built a dam for milling purposes, and found that the water would only rise to a certain height. One of the brothers explored the several creeks in the neighborhood, and found the water flowing into the Cataraqui, through a narrow passage, above Upper Brewer's, where he built a dam, at a place known since as the "Round Tail."

BREWER'S UPPER MILLS.

From Jones' Falls to Brewer's Mills, a distance of 11 miles, the waters have been raised by the dam at White Fish Creek and Brewer's Mills, over a low swale, called

Cranberry Marsh, now Cranberry Lake, so as to unite the Gananoqui and Cataraqui waters. This station is on the Cataraqui river; there are two locks combined, and a swing bridge, and a cut-stone sluice, 15 feet wide. The floor of these locks is of wood, principally hemlock.

BREWER'S LOWER MILLS

Are 1¾ miles below the last station. There is one lock here, a sluice of wood, and an earth-retaining dam.

This lock is in a bad state of repair; it is built on a bad foundation, partly on rock and partly on earth. On the earth portion, which extends nearly over the whole area of the chamber, crib-work of heavy timber was constructed to a height of 3 feet; this was sheeted on top with hewn hemlock plank, 4 inches thick. Upon this platform, the front of the walls were built with the back resting upon the earth, the water found its way under the walls and made a cave of considerable dimensions, into which the east wall settled in 1861. This wall was then rebuilt on a foundation of concrete; it was considered at that time that the west wall might last for some time longer, and it was not taken down, but it is in a very shaky and uncertain state, and may fail at any time. Several rows of sheet piles were driven across the lock and along the face of the walls, either down to the rock or 8 to 10 feet in the earth, and every possible precaution taken to preserve the remainder of the work. Between the foundation timbers, the space which was all vacant, or filled with blocks and bark, was well filled with puddle, and a double floor of 3 and 2 inch pine plank was laid, as water-tight as it was possible to make it.

For a distance of 2 miles below this lock the Cataraqui Creek or River was crooked, and has been straightened by a cut. This cut is obstructed by sunken pieces of firewood and floodwood; complaints have been made of the difficulty of navigation in low water.

From this point to Kingston Mills, a distance of 10 miles, the water has been raised, by embankments nearly a mile in length, on each side of the locks, and a considerable quantity of land has been flooded. From 300 to 500 yards of stone have been provided every year to face-up and protect these banks: if a breach was formed here the consequence would be disastrous; in addition to stopping the navigation it would cut the Grand Trunk Railway and the macadamized road, and damage a considerable quantity of land and other property.

KINGSTON MILLS,

Five and a half miles from Kingston and 121 miles from Ottawa, is another important station; 1,000 acres of land were laid off by the Imperial Government for a mill site soon after the first American Revolution. A grist mill and, I believe, a saw mill, for the use of the U. E. Loyalists, was also built by the Imperial Government. There are four locks here, the upper one detached, and three combined, connected by a basin; over the upper lock there is a swing bridge, and over the combined lock the Grand Trunk Railway passes by means of a high bridge. The fall here is 45 feet.

A portion of the dam, near the locks in the bed of the old creek, is supported by a curved stone wall, which exhibited symptoms of failure some years ago, has been supported and protected by placing a large body of stone against it. There is a sluice-way, 15 feet wide, with cut stone abutments, for the regulation of the water, and passing saw-logs.

There is a wooden bridge, about 250 feet in length, over the old creek, on the line of the Kingston and Phillipsville macadamized road, that has been built and kept in repair by the Government, which should be handed over to the Company, who ought properly to assume the responsibility of attending to it.

From Kingston Mills to Kingston, 5½ miles, the navigation passes through a crooked channel, which traverses an extensive marsh. Negotiations are in progress to have this marsh straightened and improved.

GENERAL DESCRIPTION OF LOCKS.

They are of cut-stone, each 134 feet in length from mitre to mitre, and 33 feet wide. These are the dimensions of all the locks on the Canal; but from this length must be deducted the thickness and working of the gates, 12 feet, and for the breast wall 11 feet, so that vessels, to navigate freely, should not be more than 110 feet in length, and, to allow for some overhanging walls, should not be more than 31½ feet in width overall, and not draw more than 4½ feet water, as the scale of navigation is 5 feet in depth on the sills.

The walls of the locks are built of ashlar masonry, in courses of from 1 foot to 2 feet 6 inches in thickness, with vertical joints laid in cement. The bottom of the lock is generally an inverted arch of cut-stone masonry; the breast wall is raised to the level of the upper sill; the water is let into the lock through a culvert 4×3 feet, on each side; the sluice gates are worked by crabs and chains; the water is let out of the locks through sluice gates, inserted in the lower gates. The above is a general description of the locks, but there are some variations, mentioned more particularly at the different stations.

The lower sills of all the detached locks, and the lowest sill of all the combined locks, are of oak timber.

The lock houses are generally 27×27 feet, one-story high, built with rubble stone, cottage roof, covered with tin.

The gates of the sluices (whether of stone or wood) are stop logs, operated by means of crabs, placed on a bridge. Over each end of the stop log a mortice is made in the upper side of the log, through which is an iron pin, which is caught by a hook, put on the end of a pole, for the purpose.

WATER SUPPLY.

This important subject has occupied the attention of all those who are interested in maintaining the navigation of the Canal. It is considered that the water runs off more speedily in the spring now than formerly, before the country was cleared, causing freshets and damage to the works, and a short supply of water during the dry season. There are also other causes to be taken into serious consideration, viz., the mills and water-power that have been sold or leased on the line of the Canal. Almost all the owners of these mills have been making improvements or additions to their works and machinery, and, therefore, requiring more water. Several of them draw directly from the Canal, so that it is found next to impossible to make them conform to the regulations. Any interference by the officers of the Canal is considered an act of oppression. At some seasons there is an abundant supply, and at all seasons a partial supply, so that it would be hard to shut the mills up altogether. The late Ordnance, I am informed, had refused to grant any more leases of water-power, for some time before transferring the Canal to the Provincial Government.

On the tributaries of the Canal, on both sections, viz., those on each side of the summit level, principally in the Townships of Bedford, Hinchinbrooke, Loughboro', and Storrington, there are a large number of lakes, some of considerable size, most of them have bold rocky shores and narrow outlets, where dams could be made at small cost, and thus retain almost all the spring waters, and feed them gradually during the summer; the only objection to this would be parties trumping up excessive claims for damages, when I am satisfied, from personal examination, that the real damages would not be serious.

A dam has been built by Government, at the outlet of Eagle Lake; it is about 120 feet in length, 12 feet wide on top, sloping up stream, capable of raising the water 10 feet. Two openings, 8 feet wide, are left in the dam; one to regulate the water, and the other to pass saw logs. An old dam has been repaired at Crow Lake; the waters of this lake might be raised 25 feet, without doing any damage, but the area is small, not more than about three square miles.

There is a private dam at the outlet of Bob's Lake that keeps back a considerable quantity of water in the spring, and is let out when the needs of the mills on the River Tay require it. Mr. Fredenburg has dams on the lake that supply the Upper Rideau Lake for reserve for his mills at Westport. The Messrs. Chaffey have dams at the outlets of a number of lakes that supply their mills at Bedford and Massissagua.

The interests of these mill owners and the navigation of the Canal should be the same, only they might hurry their business early in the season, and use up all the reserve of water, leaving the navigation to suffer later in the season. The Messrs. Chaffey are willing to build and maintain the necessary dams in their section, if the Government would assume the responsibility of the damages.

The problem of the water supply resolves itself into three points, viz.:—Staunching the dams on the Canal to prevent unnecessary waste, curtailing the mill owners on the Canal, and preventing them from using more than the surplus water, and building dams at the lakes mentioned before, and there need be no apprehension of a short supply, except under very extraordinary circumstances.

I have the honor to be, Sir,
Your obedient servant,
JAMES D. SLATER,
Superintendent.

RIDEAU CANAL.

MEMORANDA COPIED FROM ORDNANCE DOCUMENTS.

Work commenced 21st Sept., 1826.—First Steamboat passed through Canal on 29th May, 1832.—Canal completed Aug., 1832.

No.	STATION.	Distances from Kingston.	LOCKS.			LEVEL AT FOOT OF LOCK ABOVE THE SEA.		DAMS.			Excavation in miles.	STERLING COST.			CONTRACTORS.
			No.	Lift.				No.	Length.	Height.					
				Feet.	Inches	Feet.	Inches					£	s.	d.	
1	Bytown (Ottawa).......	126¼	8	82	0	192	0	3	3,266	70	4	70,448	0	4¾	McKay & Redpath.
2	Hartwell's..	122	2	22	0	214	0	......	....	....		63,612	7	8½	do
3	Hogsback.......................................	120¾	2	13	6	227	6	1	320	60		35,472	1	8	do
4	Black Rapids........	116¾	1	10	0	237	6	1	300	12	⅛	14,170	11	11	Phillips & White.
5	Long Island...............	111½	3	27	0	264	6	3	850	68	⅓	44,292	5	8¾	do
6	Eurritt's..	85½	1	10	6	275	0	1	240	14	1½	14,004	19	1¼	Wright & Sons.
7	Nicholson's	82½	2	15	2	290	2	1	500	9	½	16,414	16	0	Stephens.
8	Clowes	81¾	1	10	6	300	8	1	481	16	1-20	12,016	10	3	do
9	Merrick's	79½	3	25	0	325	8	1	150	6	⅓	22,362	5	7¼	do
10	Maitland's....	71¼	1	4	9	330	5	1	270	8	⅛	12,391	11	7¼	Crawford.
11	Edmond's...................	66¾	1	10	10	341	3	1	343	8	1-16	11,263	8	5¼	Richardson.
12	Old Sly's	65¾	2	15	6	356	9	1	250	20	¼	20,409	0	11½	do
13	Smith's Falls..	64¾	4	33	9	390	6	2	600	24	⅛	28,856	19	0¾	do
14	First Rapids..	62¼	1	7	9	398	3	1	260	5	1¼	26,633	9	2¼	Wiley.
15	Narrows	43	1	4	0	402	3	1	600	9	1-16	7,563	7	10⅓	Richardson.
16	Isthmus	38¾	1	4	0	402	3	......	....	....	1¼	31,578	18	11	T. H. Haggart.
17	Chaffey's.......	34¼	1	12	6	398	3	......	....	....	⅛	12,880	14	7¾	do
18	Davis..	32	1	9	0	385	9	1	300	15	1-13	8,834	5	6½	Drummond.
19	Jones...	29	4	60	0	376	9	1	300	60	¼	80,357	14	11¾	McKay & Redpath.

20	Brewer's Upper Mills	18	2	19	0	316	9	1	200	20	1¾	20,821	12	3¾	Drummond.
21	Do Lower do	16¼	1	14	2	297	9	1	200	12	4¼	10,843	15	3¼	do
22	Kingston Mills	6	4	46	8	283	7	1	9,240	14	¼	60,292	29	3¼	do
23	Kingston	0	......	......	......	236	11	....	......	......	......	......			
		......	47	......	......	......	......	24	15,472	......	16½	£625,545	6	5	

Length of Locks, 134 feet. Breadth of Locks, 33 feet. Depth of water in Canal, 5 feet. Breadth of excavation, 75 feet.

	£	s.	d.
Establishment	£110,279	19	8
Gates	23,141	6	10¾
Land	44,807	12	6¼
Contracts	625,545	6	5
Sterling	£803,774	5	6

Total ascent from Bytown to Upper Rideau Lake, 292 feet 3 inches.
do descent from Upper Rideau Lake to Kidgston, 165 do 4 do
Ottawa River, 126 feet 11 inches below Lake Ontario.
do 110 feet above the sea.

TOTAL EXPENDITURE ON CONSTRUCTION, &c.

	Sterling.		
Cost of land	£ 44,807	12	6¼
Do work done by contract	625,545	6	5
Do lock gates	23,141	6	10¾
Pay of establishment	110,279	19	8
Total cost of Canal	£803,774	5	6 sterling.
	$3,911,701 47 currency.		

EXPENDITURE FOR MANAGEMENT AND REPAIRS.

	Sterling.			Currency.
Establishment (yearly)	£ 1,100	0	0	$ 5,353 32
Salaries of lockmasters and lock laborers (yearly)	3,300	0	0	16,060 00
Cost of repairs for 7 years, 1832 to 1838	52,011	0	0	253,120 20
Tolls received	29,923	0	0	145,625 27

APPENDIX No. 8.

General Statements shewing the Principal Structures, and the Quantity of Water Power Granted or Leased on the Canals of Canada.

ST. LAWRENCE ROUTE.

NAME of CANAL.	Locks.	Lock Houses, Superintendents' and Collectors' Dwellings.		Store Houses.	Swing Bridges.	Weirs of Stone or Wood.		Water Power Granted or Leased.	Length in Feet.				Tunnels.	Culverts.	Bridges over Waste weirs.
									Piers or Wharves.				Under Canal of Stone or Wood.		
									Upper Entrance.		Lower Entrance.				
		Stone or Brick.	Wood.	Stone, Brick or Wood.	Wood.	Supply.	Waste.		N. side.	S. side.	N. side.	S. side.	Roadw'y	Carriage way.	
Welland—									East.	West.	East.	West.			
Main Trunk........	...	4 B. 20 S.	8	1 W.	21 W.	2 S.	1 W. 28 S.	$1220 yearly, and 51 runs, 28 saws.	1335	2364	2256	141 S. 2746 W.	....	2 W.S. 2 S.	60
Feeder Branch ...	...	....	....	....	4 W.	....	2 S.	13 " 19 " ..	....	....	....	....	....	8 W. 1 S.W.	...
Broad Creek br'ch	...	....	1	....	1 W.	....	....	2 "	1400	1500	....	....	....	1 W.	5
Williamsburgh—									North.	South.	North.	South.			
Galops...............	...	3 S.	1	....	1 W.	1 S.	....	12 "	450 P.Wf.	650 Wf.	240 Wf.	200 Wf.	....	....	2
Junction	...	....	....	1 W.	....	....	1 S.	....	....	....	....	....	....	....	1
Point Iroquois.....	...	2 S.	....	1 W.	1 W.	2 S. 1 W.	....	12 "	....	....	350 Wf.	50 P.	....	....	1
Rapide Plat........	2	4 S.	....	1 W.	1 W.	1 S.	....	8 "	450 P.Wf.	275 P.	400 P.	50 P.	....	....	1
Farran's Point.....	1	2 S	....	....	....	1 S.	....	8 "	450 Wf.	300 P.	740 P.Wf.	175 P.	....	....	1
Cornwall..............	7	12 B.	1	1 W.	1 W.	6 S. 4 W.	....	47 "	1450 P.	....	550 P. 317 Wf.	....	4	3	5
Beauharnois..........	9	25 S.	....	1 W.	9 W.	10 S.	2 S.	28 "	....	470 W.P.	450 W.P.	450 W.P.	....	10 S.	26
Lachine	5	5 S.	....	....	1 Iron. 6 W.	2 S. 1 W.	4 S.	60 runs & surplus water at 2 Locks	600 P. 450 W.	5860 S.P	4250 W.	850 W.	....	3 W.S.	23
Total.......	...	77	11	6	46	31	38	241 runs & surplus water for machinery saws, &c......	6585	11419	9553	4662	4	30	125

OTTAWA AND RIDEAU ROUTE.

Ste. Anne	1	1 B.	1	......	......	......	......	......	150 P.	896 P.	890 P.	67 P.	......	......	1
Carillon	3	3 S.	1	1 W.	......	1	......	......	......	......	......	......	3	......	1
Chûte à Blondeau	1	1 S.	......	......	......	......	......	......	......	......	......	......	......	......	......
Grenville	7	4 S.	1	1 W,	2	......	5 S.	......	......	60	......	......	4	......	4
Rideau	47	29 S.	12	2 S. 16 W.	8 1 draw 2 fixed	Not class'd	8 S. 16 W.	8 runs and additional power let for $690......	......	......	......	......	......	......	13
Total	...	38	15	20	13	1	24	8 runs and additional power let for $690......	150	956	890	67	7	......	19

RICHELIEU ROUTE.

St. Ours	1	1 B.	......	1 W.	......	......	......	Not less than 2 runs......	......	272 P.	......	420 P.	......	......	......
Chambly	9	2 B.	6	1 W.	8	......	3 W.	None.	1241 Wf.	......	317 Wf.	......	......	3 W.	6
Total	...	3	6	2	8	......	3	......	1241	272	317	420	......	3	6

Statements Nos. 1, 2, 3, have been compiled from the reports furnished by the following persons in charge of the works, viz:—

From No. 84,583, by J. G. Sippell, 25th February, 1867, Sub. 1090, in answer to No. 4,640.
do 84,480, by D. A. McDonald, 18th do do 61,466.
do 84,478, by Isaac Rose, 18th do do 61,466.
do 84,530, by S. D. Woodruff, 16th do do do

The words Brick, Stone, Wood, are designated by the letters B, S, W., and the words Pier and Wharf by the letters P, Whf.

APPENDIX No. 9.

(No. 243.)

REPORT BY S. D. WOODRUFF, SUPERINTENDENT.

DESCRIPTION OF THE WORKS AT THE HARBOR OF PORT DOVER.

WELLAND CANAL OFFICE,
St. Catharines, July 8th, 1867.

F. BRAUN, Esquire,
Secretary Public Works, Ottawa.

SIR,—In compliance with the instructions conveyed to me in your letter, No. 62,923, I have the honor to report, in reference to the Harbor at Port Dover. This work is situated at the mouth of Patterson's Creek, in the Township of Woodhouse, Long Point Bay, Lake Erie, and consists of two long piers, stretching out into the Bay. These piers are 75 feet apart, with a channel dredged out to a depth of 10 feet at low water.

The west pier is 990 feet in length. Its outer part, for 800 feet, consists of timber superstructure, raised upon cribs, and is 15 feet in width. The outer 460 feet of it has been several years in use, and will require soon to be rebuilt above the water. Inside of this, for 340 feet, the superstructure has been rebuilt, and is in good condition. The remainder of the inner part, for 190 feet, has been constructed of piles, and is in a dilapidated state, the seas washing through it, thereby carrying deposits into the harbor.

The east pier is 1,050 feet in length, and 15 feet in width, constructed with crib-work and timber superstructure, the same as the outer part of the west pier, except that it is not planked.

The outer 600 feet is much decayed, and will very shortly require rebuilding, above the water surface, and some additional filling with stone.

The remaining part of this pier is in a good state of repair.

I have the honor to be, Sir,
Your obedient servant,

S. D. WOODRUFF,
Superintendent.

APPENDIX No. 10.

SECTIONS I TO IV INCLUSIVE.

TABULAR STATEMENT OF THE LIGHT HOUSES IN CANADA.

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Works, constructed, in progress of construction, or managed by the Department of Public Works, and the Trinity Houses of Quebec and Montreal, and of those in charge of Private Individuals and Companies.

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Public Works, and the Trinity Houses of Quebec and Montreal,

SECTION 1.—List of the Light Houses between the Straits of Belle-Ile and Quebec, under the management of

No.	No. of Admiralty List, corrected to Jan., '67.	Name of Light.	Locality of Light.	Latitude North.	Longitude West.	Characteristic or Order of Light, and Color of Light.	Fixed, Flashing or Revolving.
		LABRADOR.		° ′ ″	° ′ ″		
1	1	Belle-Ile (Straits of Belle-Ile.)	Extreme S. point of Island......	51 53 00	55 22 15	Light 1st order. Dioptric.	Fixed ...
2	2	Amour Point.........	S.E. side of Forteau Bay........	51 27 35	56 50 53	Light 2nd order. Catadioptric.	do
		GULF & RIVER ST. LAWRENCE (*Between Straits of Belle-Ile & Quebec*).					
		EASTERN CANADA.					
3	22	St. Paul Island	On a rock 26 ft. from Island...	47 13 50	60 8 20		do
4	23		On the S.W. point	47 11 20	60 9 36		Revolv'g every minute.
5	25	Cap Rosier............	On the Cape........................	48 51 37	64 12 00	Light 1st order. Catadioptric.	Fixed ...
6	26	Anticosti Island	Heath Point........................	49 5 20	61 41 48	17 lamps and reflectors.	do ...
7	27		S.W. point..........................	49 23 45	63 35 46	21 lamps and reflectors.	Rev. ev'y min.
8	28		Extreme W. point................	49 52 30	64 32 00	Light 2nd order. Catadioptric.	Fixed ...
9	29	Pointe des Monts ...	About 1¼ miles N.E. of the Point.	49 19 35	67 21 55	17 lamps and reflectors. Red lig't	do ...
10	30	Father Point, Rimouski.	On the Point........................	48 31 25	68 27 18	6 lamps and reflectors.	do ...
11	31	Bicquette Island.....	Centre nearly.	48 25 18	68 53 20	21 lamps and reflectors.	Rev. ev'y 2 min.
12	32	Red Islet	Centre................................	48 4 20	69 32 56	24 lamps and reflectors. Red lig't	Fixed ...
13	33	Green Island.........	On the N. point....................	48 3 17	69 25 3	13 lamps and reflectors.	do ...
14	34	Brandy Pots...........	42 fathoms from S.E end of Islet	47 52 30	69 40 35	Light 4th order. Lenticular.	do ...
15	35	Long Pilgrims........	20 fathoms W. of the centre of the Island, and 54 fathoms S. from water's edge.	47 43 15	69 45 00	do	do ...

LIGHT HOUSES OF CANADA,

Works, constructed, in progress of construction, or managed by the Department of and of those in charge of Private Individuals and Companies.

and between Quebec and Platon, built by the Department of Public Works, and placed the Quebec Trinity House.

Miles seen in clear weather	Color or peculiarity of Light House.	Height in ft.—Centre of Lantern above water.	Height in ft, of Building, from base to vane.	Description of Oil.	When lighted and extinguished.	Year first lighted.	REMARKS.
28	Circular tower, clapboarded and painted white.	470	62	Coal oil..	April 1, Dec. 15	1858	Visible round horizon. A gun is fired every hour during fog and snow storms. Depot of provisions here for shipwrecked mariners. Variation in 1867, 39 deg. W.
18	do	155	109	do ..	do	1858	A gun fired here every hour during fog and snow storms.
20	Octagonal, wood, white.	140	40	....	....	1839	Obscured between N. by E. ½ E. and E.N.E.
20	do	140	40	....	....	1831	Bell sounded during a fog, and a gun fired every four hours, commencing at 4 a.m. Visible on bearings, except between S.S.E. and W.
16	Circular stone tower, faced with white brick.	136	12	Coal oil..	do	1858	Variation in 1867, 25 deg. 52 min. W. A gun is fired every hour during fog and snow storms.
15	Conical grey stone	110	90	do ..	do	1835	The Light house must always be kept open Southward of Cormorant Point. Visible from N.N.W. to N.E. by N. Depot of provisions here for shipwrecked mariners.
15	do	100	75	do ..	do	1831	Visible from the bearings of N.NW. round by the South to S.E. by E.
15	Circular stone tower, faced with white fire brick.	112	109	do ..	do	1858	A gun is fired every hour during fog and snow storms. Depot of provisions for shipwrecked mariners.
15	Circular stone tower, faced with fire brick.	100	75	do ..	do	1830	Depot of provisions for shipwrecked mariners. Variation in 1867.
10	Octagonal, white..	43	....	do ..	Apr. 10, Dec. 10	1859	Visibls from the bearings of W. by S. ¼ S., round Southerly to E. ½ N. Pilots stationed here.
17	do	112	65	do ..	do	1844	A gun fired every half hour during fog and snow storms, from 10th April to 15th December.
12	Red	75	51	do ..	do	1848	Red light.
13	Stone, square, white.	60	40	do ..	do	1809	A gun fired every half hour during fog and snow storms.
10	Circular, brick, painted drab.	78	39	....	do	1862	
12	do	180	39	....	do	1862	

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Public Works, and the Trinity Houses of Quebec and Montreal, and of

SECTION I.—List of the Light Houses between the Straits of Belle-Ile and Quebec, under the management of the

No.	No. of Admiralty List, corrected to Jan., '67.	Name of Light.	Name of Light.	Latitude North.	Longitude West.	Characteristic or Order of Light, and Color of Light.	Fixed, Flashing or Revolving.
		GULF & RIVER ST. LAWRENCE.					
		Eastern Canada—*Continued.*		° ′ ″	° ′ ″		
16	36	Gaspé Basin..........	O'Hara Point Wharf.....	48 49 53	64 31 41	....	Fixed ..
17	37	South Traverse, Light Vessel.	N.E. part of St. Roch Shoals..	47 22 10	70 14 56	16 lamps and 2 reflectors.	do ...
18	38	Stone Pillar..........	50 fathoms from S. point of Islet	47 12 25	70 21 36	15 lamps and reflectors.	Revolv'g every 1½ minutes.
		RIVER ST. LAWRENCE.					
19	39	Grande Ile de Kamouraska.	120 fathoms from N.E. end of Island, 80 fathoms from water's edge.	....	....	Catoptric. 7 lamps and reflectors.	Fixed ...
20	40	Crane Island	Bears E. ¼ S. from red beacon, S. of point of Island 143 fathoms.	....	....	Catoptric. 5 lamps and reflectors.	do ...
21	41	Bellechasse.............	E. end of Island......................	... .	....	do	do ...
—	.....	Pointe St. Laurent..	....	....	....	....	....
22	42	St. Antoine............	On South Shore..............	46 39 43	71 36 10	Catoptric. 2 lamps and reflectors.	do ...
23	43	Ste. Croix...............	On S. Shore, near high water mark, and ¼ of a mile N. of the church.	46 37 45	71 44 10	do	do ...
24	44	Portneuf................	On N. Shore, ¾ of a mile off the river.	46 41 48	71 52 10	do	do ...

LIGHT HOUSES OF CANADA,

Works, constructed, in progress of construction, or managed by the Department of those in charge of Private Individuals and Companies.—*Continued.*

and between Quebec and Platon, built by the Department of Public Works, and placed Quebec Trinity House.—*Continued.*

Miles seen in clear weather.	Color or peculiarity of Light House.	Height in ft.—Centre of Lantern above water.	Height in ft. of Building, from base to vane.	Description of Oil.	When lighted and Extinguished.	Year first lighted.	REMARKS.
....	....	20	....	....	....	....	Red light, only when mail steamers are expected. Variation in 1867, 26 deg. W.
9	Two masts	... .	....	Porpoise and seal	Sunset to sunrise from opening to closing of navigation.	1830 alter'd 1860	Gong sounded every five minutes during a fog.
13	Stone, conical, white.	68	38	Coal oil..	do	1843	
.....	Wood, square.....	166	39	do ..	... .	....	
......	Wood, octagonal..	44	37	do ..	....	....	
......	Wood, square......	70	30	do ..	....	....	
.....	....	....	....	....	....	....	Unfinished.
10	Wood, white	96	....	do ..	Light exhibited all night.	1858	A small light to assist in keeping in channel for some distance, up and down the River.
6	do	30	20	do ..	do	1842	These lights, in one, lead up Richelieu Channel to the light on Richelieu Island.
5	Stone, white........	200	....	do ..	do	1842	

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Public Works, and the Trinity Houses of Quebec and Montreal,

SECTION II.—List of the Light Houses between Quebec and Montreal, not including

No.	No. of Admiralty List, corrected to Jan., '67.	Name of Light.	Locality of Light.	Latitude North.	Longitude West.	Characteristic or Order of Light, and Color of Light.	Fixed, Flashing or Revolving.
		RIVER ST. LAWRENCE. — EASTERN CANADA—*Continued.*		° ′ ″	° ′ ″		
1	45	Platon Point.........	On S. side, 1½ miles below Richelieu Island.	46 39 13	71 53 3	2 lamps, 4 reflectors	Fixed ...
2	46	Richelieu	On centre of the Island	46 38 24	71 54 51	2 do do	do ...
3	47	Langlais Point......	On S. shore, ½ a mile below Great Chêne River.	46 35 05	71 59 35	2 do do	do ...
4	48	Cape Charles.........	On the cape	46 33 39	72 4 15	2 do do	do ...
5	49	Grondines	On N. shore.........................	46 35 49	72 4 12	2 do do	do ..
6	50	St. Pierre les Becquets.	On S. shore, summit of St. Pierre Point.	46 30 28	72 12 30	2 do do	do ...
7	51	Batiscan	On N. shore, 1¼ miles below Batiscan Church.	46 30 16	72 14 52	2 do do	do ...
8	52	Champlain	N. shore, near Champlain Church.	46 26 34	72 20 32	2 do do	do ...
9	54	Cap de la Madeleine, lower lights.	N. shore, 3 miles below the cape	46 23 46	72 27 18	2 do do	do ...
10	55	Cap de la Madeleine, upper lights.	N. shore, 2 miles below the cape	46 23 16	72 28 38	2 do do	do ...
...	......	Pointe St. Grégoire.	Pointe St. Grégoire removed to Port St. Francis.	....	....	....	....
11	56	Port St. Francis, 2 lights now.	S. shore	46 16 20	72 37 15	1 lamp and reflector	Fixed ...
12	57	Pointe du Lac	N. shore.............................	46 16 50	72 40 22	1 do do	do ...

LIGHT HOUSES OF CANADA,

Works, constructed, in progress of construction, or managed by the Department of and of those in charge of Private Individuals and Companies.

those between Quebec and Platon Point, built and managed by the Montreal Trinity House.

Miles seen in clear weather.	Color or peculiarity of Light House.	Height in ft.—Centre of Lantern above water.	Height in ft. of Building, from base to vane.	Description of Oil	When lighted and extinguished.	Year first lighted.	REMARKS.
12	Wood—Square —White.	152 130	24 7	Coal Oil..	Light exhibited all night while the navigation is opened.	1816	These lights lead up the Richelieu. Variation in 1867, 14½ deg. W.
6	do ...	27	20	do ..	do	1816	This light and the lights on Platon Point are very nearly in the same line of bearing, namely, W. 73 deg. E.
5	do ...	35	8	do ..	do	1844	To show off Batture des Grondines and to avoid Battures Cordin, and as a steering point for Richelieu.
4	do ...	110	20	do ..	do	1856	Lead to and from Cap à la Roche and Cape Charles, and to answer as a steering point through Richelieu.
5	do ...	50	30	do ..	do	1857	To lead off Cap à la Roche to Levrard.
5	do ...	85	12	do ..	do	1844	To indicate the widest berth off Cap à la Roche.
3	do ...	39 20	31 11	do ..	do	1844	To lead through Levrard and clear Batture Ste. Anne on S. and Pouillon on N.
4	do ...	30	10	do ..	do	1844	Variation in 1867, 13¾ deg. W. Steering point for lower part of Bay of Champlain.
4	do ...	53 33	13 10	do ..	do	1843	To clear Batture Bigot, Variation in 1867, 13 deg. 34 min. W.
6	do ...	50 35	30 10	do ..	do	1843	These are very small lights, only 4 feet square. They are removed every fall and replaced in the following spring, to avoid the ice.
......	....	......	......	....	....	....	
3	Wood—Square —White.	31 12	21 4	Coal Oil..	Light exhibited all night while the navigation is opened.	1839	This light in one with the E. light vessel, leads up through the dregged channel. S. 70 deg. W.
12	do ...	71	24	do ..	do	1843	Shows the turn of channel at Pointe du Lac.

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Public Works, and the Trinity Houses of Quebec and Montreal, and of

SECTION II.—List of the Light Houses between Quebec and Montreal, not including House.—

No.	No. of Admiralty List, corrected to Jan., '67.	Name of Light.	Locality of Light.	Latitude North.	Longitude West.	Characteristic or Order of Light, and Color of Light.	Fixed, Flashing or Revolving.
		RIVER ST. LAWRENCE.					
		EASTERN CANADA—*Continued.*		° ′ ″	° ′ ″		
13	58	Lake St. Peter. E. Light-vessel..	In lake...........................	46 15 56	72 42 18	3 burners in each vessel, but no reflectors.	Fixed.....
14	59	Centre do ...	S.S.E., 2¼ miles from Rivière du Loup.	46 11 39	72 53 20		do ...
15	60	W. do ...	N. side of channel, N.E. by N., 3 miles from Flat Island.	46 09 39	72 56 50		do ...
16	61	Ile aux Raisins	On the Island......................	46 06 14	72 57 50	2 lamps & reflectors	do ...
17	62	do	S. part of Island..................	....	....	....	....
18	63	Ile à la Pierre......	On the E. part of Island..........	46 05 54	72 59 40	1 lamp & reflector	Fixed.....
19	......	Sorel	On wharf	....	....	....	....
20	64	La Valtrie	S. side of Island	45 52 55	73 16 00	4 lamps & reflectors	Fixed.....
21	65	Traverse...............	2½ miles above Contrecœur......	45 49 52	73 17 00	2 do do	do ...
22	66	Ile aux Prunes... ..	Opposite Verchères, on Ile aux Prunes.	....	....	....	....
23	67	Repentigny	¾ of a mile below Repentigny ...	45 45 02	73 26 08	2 lamps & reflectors	Fixed.....
24	68	Ile à la Bague......	On the Islet (Ile à la Bague)....	45 44 14	73 26 15	2 do do	do ...
25	69	Ste. Thérèse	On the Island......................	45 41 22	73 27 40	2 do do	do ...
26	70	Pointe aux Trembles	W. shore	45 38 26	73 29 20	2 do do	do ...
27	71	Montreal...............	On Island wharf	45 30 22	73 33 14	2 do do	do ...

LIGHT HOUSES OF CANADA,

Works, constructed, in progress of construction, or managed by the Department of those in charge of Private Individuals and Companies.—*Continued.*

those between Quebec and Platon Point, built and managed by the Montreal Trinity *Continued.*

Miles seen in clear weather.	Color or peculiarity of Light House.	Height in ft.—Centre of Lantern above water.	Height in ft. of Building, from base to vane.	Description of Oil.	When lighted and extinguished.	Year first lighted.	REMARKS.
6	Red	15	8	do ..	....	....	Removed at the approch of winter, on account of ice. On S. side of Petite Traverse, off Rivière du Loup.
6	do	15	8	do ..	Light exhibited all night while the navigation is opened.	1816	Removed to indicate the turn of the channel and leads to No. 2.
6	do	15	8	do ..	do	1828	Variation in 1867, 13 deg. W. In connexion with Isle à la Pierre, and bearing in line with No. 1, and to avoid Batture St. François and à la Carpe.
6	Wood—Square —White.	30	20	....	do	1843	
......	....	... .	....	....	do	1863	
6	Wood—Square —White.	30	....	Coal Oil..	....	....	Indicate entrance to channel & leads to No. 1.
......	....	....	....	....	....	....	
7	Wood—Square —White.	21 13	17 9	....	Light exhibited all night while the navigation is opened.	1831	Leads to channel called Flat Islands.
.....	do ...	....	....	....	do	1838	To lead into La Valtrie channel and Isle Bouchard, and indicates the new channel to be kept in line till La Valtrie lights are brought to bear.
......	....	....	....	....	....	....	Proposed.
4	Wood—Square —White.	30 14	26 14	....	Light exhibited all night while the navigation is opened.	1843	To lead through Ile à la Basque channel, and to avoid Pouillon on N., and shoal on S.
4	do ...	24	16	....	do	1831	To indicate the Island, being extremely low land.
4	do ...	....	....	....	....	....	Variation in 1867, 12 deg. W. Leads to entrance through Verchères channel up and down the river.
....	do ...	....	53 25	....	Light exhibited all night while the navigation is opened.	1846	To lead through the channel between Pointe aux Trembles and Varennes up to Long Point.
4	do ...	38 29	31 21	....	do	1830	Red light. Variation in 1867, 11½ deg. W. Indicates the deepest channel to and from the harbor.

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, etc., of these Provincial Public Works, and the Trinity Houses of Quebec and Montreal,

SECTION III.—List of Light Houses, above Montreal, on the St. Lawrence, the

No.	No. of Admiralty List corrected to Jan., '67.		Name of Light.	Locality of Light.	Latitude North.	Longitude West.	Characteristic or Order of Light, and Color of Light.
			RIVER ST. LAWRENCE. — EASTERN CANADA.—*Contin'd.*		° ′ ″	° ′ ″	
1	72	River Ottawa and Lake St. Louis.	Lachine	On the pier, at the entrance of Canal, S. shore.	45 25 00	73 43 18	1 lamp and reflector.
2	73		Lake St. Louis Light Vessel.	4-5ths of a mile above Lachine..	45 26 30	73 42 10	2 do
3	74			3 miles above Lachine	45 25 48	73 44 15	2 do
4	78		Chateauguay Light Vessel.	4½ miles above Lachine	45 24 00	73 49 18	3 do
5	79		Beauharnois, 1st Range Light.	Lower entrance of Canal, S. shore.	45 19 45	73 54 30	2 do
6	79		Beauharnois, 2nd do ..	S. side of Canal, 5.61° W., 412 ft. from 1st range light.	....	....	3 do
7	75		Light Vessel near Pointe Claire.	S. side of channel, 63 chains above Ile Duyal, from light No. 3, on St. Lawrence.	45 24 25	73 45 20	3 do
8	76		Pointe Claire Pier Light.	On shoal, N. side of channel, about 1½ miles below Pointe Claire, 120 chains W. from light ship near Pointe Claire.	....	....	2 do
9	77		Green Shoal..................	On a pier, S. side of channel, at Templeton, 7 miles below Ottawa City.	....	....	2 do
10	80	Lake St. Francis,	Knight's Point, 1st Range Light.	S. side of channel, on a pier, 1 mile 49½ chains W. of guard lock, upper entrance of Beauharnois Canal.	....	....	1 do
11	81		do 2nd do	S. side of channel, on the main land, 4 1-5th chains S.W. from 1st range light.	....	....	1 do
12	81		do 3rd do	N. side of channel, on a pier, 18 chains N.W. of 2nd range light, off Knight's Point.	....	....	1 do
13	80		Grosse Pointe, Main Light	N. side of channel, on a pier, 13 4-5ths chains W. of 3rd range light, 1 mile 76¾ chains W. from guard lock, and 36 chains N.E. from W. corner of pier at Grosse Pointe.	....	....	2 lamps, white.....
14	83		McKies Point	N. shore, near Province Line...	45 12 25	74 19 00	2 lamps and reflectors.
			Beacon, Lake St. Francis.	On a reef, between McKie's Point and Cherry Island.	....	....	... .

LIGHT HOUSES OF CANADA,

Works, constructed, in progress of construction, or managed by the Department of and of those in charge of Private Individuals or Companies.

Lakes and the Ottawa River, in charge of the Departement of Public Works.

Fixed, Flashing or Revolving.	Miles seen in clear weather.	Color or Peculiarity of Light House.	Height in ft.—Centre of Lantern above water.	Height in ft. of Building, from base to vane.	Description of Oil.	When lighted and extinguished.	Year first lighted.	REMARKS.
Fixed ...	.....	Square — wood—white.	23	17	Coal oil.	All the night when navigation is open.	1849	
do ...	6	Circular—of iron—red.	20	....	do	do	1850	
do ...	6	Red	20	....	do	do	1850	
do ...	6	Red	20	....	do	do	1849	
do ...	10	Wood—square frames.	10	....	do	do	1850	In one, lead to Chateauguay light.
do ...	.....	Wood—red top.....	....	....	do	do	1852	
do ...	6	Iron	20	17	do	do	1860	
do ...	......	Wood.................	29	25	do	do	1860	
do ...	......	do	36	17	do	do	1860	
do ...	......	do red............	....	....	do	do	1848	
do ...	......	do white	....	....	do	do	1850	
do ...	......	do do	....	....	do	do	1850	
do ...	8	do red	....	....	do	do	1846	To be kept in one, when leaving the Canal, till the upper lights come in one.
do ...	10	Square—wood.....	30	24	do	do	1847	Midway between Côteau and Cherry Island.
....	......	Wood—colour.....	....	....	do	do	....	

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Publics Works, and the Trinity Houses of Quebec and Montreal, and of

SECTION III.—List of Light Houses above Montreal, on the St. Lawrence, the Lakes

No.	No. of Admiralty List corrected to Jan., '67.		Name of Light.	Locality of Light.	Latitude North.	Longitude West.	Characteristic or Order of Light, and Color of Light.
			RIVER ST. LAWRENCE.				
			WESTERN CANADA.		° ' "	° ' "	
15	84	Lake St. Francis.	Cherry Island	S. side of N. channel, ½ mile from shore, 2 miles W. of St. Anicet.	45 9 15	74 22 30	3 lamps and reflectors.
16	85		Cherry Light Vessel	Above Island, on shoal, S. side of channel, 3½ miles below Lancaster.	45 8 20	74 25 40	3 do
17	86		Lancaster Pier	N. side of canal, on pier, Lancaster bar, 3 miles above Lancaster.	45 6 4	74 30 00	3 lamps and 2 reflectors.
18	*86	Between Lake St. Francis and Lake Ontario.	Cornwall Canal.......	S. side of canal, at upper entrance.	45 1 15	74 55 25	....
19	87		Coles Shoal	On pier, 5 miles W. of Brockville, ¾ of a mile from N. shore.	....	....	2 lamps and reflectors.
20	88		Grenadier Island	S.W. point of Island, N. side of channel, 2 miles below Rockport.	....	....	3 do
21	89		Lindoe Island	N.W. point of Island, S. side of channel, 5 miles W. of Rockport.	....	. ...	3 lamps and 2 reflectors.
22	90		Gananoqui Narrows	N. E. end of Little Stave Island, S. side of channel, 5 miles below Gananoqui.	....	....	3 lamps and reflectors.
23	91		Jack Straw Shoal..........	On a pier, N. side of channel, 3 miles below Gananoqui.	....	....	3 do
			Beacon, near Jack Straw.	About 100 yards S. E. of Jack Straw, on a rock.	....	....	....
24	92		Spectacle Shoal............	On pier, N. side of channel, 2 miles W. of Gananoqui.	....	....	2 lamps and reflecfors.
25	93		Red Horse Rock...........	On pier, S.E. side of channel, 2½ miles W. of Gananoqui.	....	....	2 do
26	94		Burnt Island	S. E. point of Island, N. side of channel, 3½ miles W. of Gananoqui.	....	....	3 lamps and 2 reflectors.
27	95		Wolfe Island.................	On extreme N.E. point of Island, 18 miles S. E. of Kingston.	....	....	3 lamps and reflectors.
28	96		Kingston	S.E. part of Town................	44 13 30	76 29 00	....
29	97	Lake Ontario.	Snake Island.................	On pier on Bar, N. side of channel, 5 miles W. of Kingston.	44 11 30	76 33 00	3 lamps and 2 reflectors.
30	98		Gage or Simcoe, Point Yeo formerly Nine Mile P't	N.W. point of Simcoe Island, 9 miles west of Kingston.	44 09 00	76 33 00	7 lamps & reflectors
31	99		Outer Drake or False Ducks.	E. end of Island, 1 mile S. of Timber Island, 3 miles S.E, of Point Travers.	43 57 00	76 49 00	15 do

LIGHT HOUSES OF CANADA,

Works, constructed, in progress of construction, or managed by the Department of those in charge of Private Individuals and Companies.—*Continued.*

and the Ottawa River, in charge of the Department of Public Works.—*Continued.*

Fixed, Flashing or Revolving.	Miles seen in clear weather.	Color or peculiarity of Light House.	Height in ft.—Centre of Lantern above water.	Height in ft. of Building, from base to vane.	Description of Oil.	When lighted and extinguished.	Year first lighted.	REMARKS.
Fixed ...	10	Square—wood.....	40	30	Coal oil..	All the night when navigation is open.	1847	Opposite the light there is a beacon N. of the channel.
do ...		do	....	....	do	do	1849	
do ...	8	do	20	20	do	do	1844	
....	......	....	....	....	....	do	1865	Variation in 1867, 9½ W.
Fixed ...	6	Wood—square—white.	33	31	Coal oil..	All the night when navigation is open.	1856	These small lights are for the purpose of making out the channel through the Thousand Islands, between Brockville and Kingston.
do ...	....	do	55	37	do	do	1856	
do ...	......	do	40	26	do	do	1856	
do ...	......	do	44	37	do	do	1856	
do ...	......	do	31	29	do	do	1856	
....	......	....	....	....	....	....	1855	
Fixed ...	......	Wood—square—white.	28	26	Coal oil..	All the night when navigation is open.	1856	
do ...	......	do	23	26	do	do	1856	
do ...	......	do	64	26	do	do	1856	
do ...	......	do	....	....	....	....	1861	
Fixed ...	4	Square—wood—white.	....	....	Keros'ne	All the night when navigation is open.	1844	Not lighted in 1863. Variation in 1867, 7° 0' W.
do ...	6	Stone—square	35	....	do ...	do	1858	Red light.
do ...	15	Round—stone	45	40	do ...	do	1833	
do ...	22	do	68	62	do ...	do	1828	

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Public Works, and the Trinity Houses of Quebec and Montreal, and of

SECTION III.—List of Light Houses above Montreal, on the St. Lawrence, the Lakes,

No.	No. of Admiralty List corrected to Jan., '67.		Name of Light.	Locality of Light.	Latitude North.	Longitude West.	Characteristic, or Order of Light, and Color of Light.
			RIVER ST. LAWRENCE.				
			WESTERN CANADA.				
			Continued.		° ' "	° ' "	
32		Lake Ontario.	Point Pleasant	Entrance to Bay of Quinte, E. end Prince Edward Peninsula, 7 miles S.W. from Bath.	....	....	9 lamps and reflectors.
33	100		Peter point, Lay point...	Long Point, Lake Ontario, on main land N. Shore.	43 51 0	77 08 30	10 do
34	101		Scotch Bonnet or Egg Island	On small Island, 1 mile S.W. of Nicholson's Island.	43 54 0	77 33 0	8 do
35	102		Presqu'Ile, Main Light....	On extreme E. point.	44 1 0	77 41 0	10 do
36	103		do 1st Range Light	On pier, Salt Point Island. S, of channel.	44 0 0	77 42 0	1 do
37			do 2nd Range Light	On main land, 55 yards from shore.			1 do
38	105		Peter Rock or Gull Isl'd.	On reef, 2 miles from main land, N. side of channel, W. by S. 4 miles from Cobourg.	43 56 30	78 13 0	10 do
39	111		Gibraltar Point............	S.W. side of point, 3 miles S. of Toronto.	43 37 0	79 23 30	12 do
40	114		Oakville,.........	Pier-head..............................	43 26 45	79 40 30	5 do
41	115		Burlington Bay	On S. side of canal	....	....	5 do
42	115		do Range Light	End of South Pier.................	....	....	2 do
43	116		Dalhousie Harbour	East pier head, at lower entrance of Welland Canal.	43 13 30	79 15 30	10 do
44	117	Lake Erie.	Port Colborne..............	W. pier head, at upper entrance of Welland Canal.	42 53 30	79 17 0	10 do
45	117		do Range Light.	On pier, at upper entrance of Welland Canal.	....	....	1 do
46	118		Mohawk Island............	On Island between Ports Maitland and Colborne, 1 mile S. W. from main land.	42 50 40	79 35 0	10 do
47	119		Port Maitland..............	West pier	42 52 0	79 37 45	6 do
48	120		Port Dover..................	West pier..........................	42 47 0	80 13 0	4 do
49	121		Long Point	On point, ¼ of a mile from S.E. end.	42 33 0	80 05 30	15 do
50	122		Big Otter Creek, or Port Burwell.	333 yards in shore, on main land, in village.	42 39 0	80 49 30	3 do
51	124		Port Stanley................	Extreme end of west pier, near Village.	42 40 0	81 12 30	3 do
52	125		Point Pelée Reef..........	On caisson, on sand bar, ¾ of a mile S. from extreme end of point.	41 52 0	82 29 30	7 do
53	126		Pelée Island	On extreme N.E. end of Island	41 50 0	82 37 30	14 do

LIGHT HOUSES OF CANADA.

Works, constructed, in progress of construction, or managed by the Department of those in charge of Private Individuals and Companies.—*Continued.*

and the Ottawa River, in charge of the Department of Public Works.—*Continued.*

Fixed, Flashing or Revolving.	Miles sesn in clear Weather.	Color or peculiarity of Light House.	Height in ft.—Centre of Lantern above water.	Height in ft. of Building, from base to vane.	Description of Oil.	When lighted and extinguished.	Year first lighted.	REMARKS.
Fixed....	.... .	Octagon—wood...	45	52	Coal oil..	All the night while navigation is open.	1866	On lot 22, Marysburg, Prince Edward Island.
Rev.ev'y min. & 40 sec.	21	Round—stone.....	62	60	do ...	do	1333	Variation in 1867.
Fixed ...	......	Stone................	51	54	do ...	do	1856	
....	18	Octagon—stone...	....	....	do ...	do	1840	
....	......	....	....	....	do ...	do	1851	
....	......	....	....	....	do ...	do	1851	
Fixed ...	10	Octagon—stone...	45	48	do ...	do	1840	On a rock half a mile off shore.
do ...	18	Hexagonal—stone	66	62	do ...	All the night while navigation is open.	1820	High light, red.
do ...	12	Octagon—wood...	42	36	do ...	do	1836	
do ...	15	One white, one red	....	....	do ...	do	1838	
do ...	4	Suare—octagon...	60	54	do ...	do	1845	
Revolv'g	10	Wood	....	....	do ...	....	1852	
Fixed ..	12	Wood	58	54	do ...	All the night while navigation is open.	1852	Entrance to Weiland Canal.
do ...	.. ...	....	....	....	do ...	....	....	
Revolv'g	10	Round—stone	64	60	do ...	....	1848	Variation in 1857, 1° 20' W.
Fixed ...	10	Square—wood—white.	....	....	do ...	All the night while navigation is open.	1848	Grand River entrance.
do ...	8	do ...	20	20	do ...	do	1846	
do ...	25	Octagon—wood...	65	60	do ...	do	1843	
do ...	12	do ...	96	46	do ...	do	1840	
do ...	4	Lantern	20	20	do ...	do	1844	No variation in 1867.
do ...	......	....	76	61	do ...	do	1861	
do ...	9	Round—stone.....	45	40	do ...	do	1833	Bearing W. by N. clears Pelee shoal.

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Public Works, and the Trinity Houses of Quebec and Montreal, and of

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No.	No. of Admiralty List corrected to Jan., '67.		Name of Light.	Locality of Light.	Latitude North.	Longitude West.	Characteristic, or Order of Light, and Color of Light.
			RIVER ST. LAWRENCE.				
			—				
			Western Canada—*Continued*				
					° ′ ″	° ′ ″	
54	127	Detroit River	Amherstburgh................	S. end of Bois Blanc Island, about 1 mile from Amherstburg.	42 5 0	83 6 30	6 lamps & reflectors.
55	128	L. Ste. Claire.	River Thames...............	Mouth of river, south shore.....	42 18 0	82 36 00	4 do
56	128		do Range Light.	On pier about 55 yards N. from main light.	....	....	1 do
57	129	Lake Huron.	Goderich	On high bank, S. of entrance to harbour. Two on N. pier.	43 44 33	81 43 6	9 do
58	130		Point Clark.................	N. shore, about 20 miles N.E. from Goderich.	44 4 10	81 43 42	2nd order. Lenticular.
59	131		Chantry Island..............	S. side, about 1⅓ miles W. from Saugeen or Southampton.	44 29 40	81 23 20	2nd do
60	132		Isle of Coves.................	N.E. point of Island, entrance to Georgian Bay from Lake Huron.	45 19 6	81 43 41	2nd do
61	133		Griffith Island...............	N.E. side of Island, about 20 miles N. of Owen Sound, in Georgian Bay.	44 40 45	80 42 2	3rd do
62	134		Nottawasaga Island	About 3 miles N.W. from Collingwood.	44 32 30	80 08 0	2nd do
63	135		Christian Island............	S.E. part of Island, 1¼ miles from main land, at entrance to, and 20 miles from Penetanguishine.	44 47 0	79 57 30	4th do
64	......		1st Light, near Killarney	S.E. of Killarney about 1 mile, shewing entrance into that place from Lake Huron.	....	....	2 lamps.
65	......		2nd do do	North of Killarney about 1¼ miles, shewing entrance into that place from Little Current	....	....	2 do
66	......		1st do at Little Cur'nt	On shore at the village...........	....	....	2 do
67	......		2nd do do	On point of Island, N.W. from village about ¼ mile.	....	....	2 do
68	......		Clapperton Island	On N.E. point of Island, about 25 miles W. from Little Current.	....	....	3 do
69	.....	Lake Superior.	St. Ignace..................	On S.E. part of Island, about 2 miles from St. Ignace Isl'd.	....	....	3 do

LIGHT HOUSES OF CANADA.

Works, constructed, in progress of construction, or managed by the Department of those in charge of Private Individuals and Companies.—*Continued.*

and the Ottawa River, in charge of the Department of Public Works.—*Continued.*

Fixed, Flashing or Revolving.	Miles seen in clear weather.	Color or peculiarity of Light House.	Height in ft.—Centre of Lantern above water.	Height in ft. of Building, from base to vane.	Description of Oil.	When lighted and extinguished.	Year first lighted.	REMARKS.
Fixed.. ..	......	Stone, white	....	....	Keros'ne	All night while navigation is opeu.	1837	
do ...	12	do	34	30	do ...	....	1837	The two lights in one lead over Bar.
do ...	6	Wood, slate color.	15	15	do ...	....	1845	
do ...	15	Square, tower.....	150	20	do ...	....	1847	Variation in 1867, 0° 16' E.
Revolv'g	15	Stone, stone color	87	87	Sperm...	....	1859	
Fixed ...	......	do ...	86	86	do ...	....	1859	
Flash'ng	......	do ...	90	85	do ...	....	1859	Variation in 1867, 0° 30' W
Fixed ...	......	do ...	130	85	do ...	....	1859	
Revolv'g	......	do ...	86	85	do ...	....	1859	
Fixed ...	......	do ...	61	60	Keros'ne	....	1859	Variation in 1867, 1° 34' W.
do ...	......	Wood, white......	....	....	do ...	....	1867	
do ...	......	do ...	....	....	do ...	....	1867	
do ...	......	do ...	....	....	do ...	....	1867	
do ...	......	do ...	....	....	do ...	....	1867	
do ...	......	do ...	....	....	do ...	....	1867	
do ...	......	do ...	....	....	do ...	....	1867	

TABULAR STATEMENT OF THE

Shewing the Names, Positions, Characteristics, Dimensions, &c., of these Provincial Public Works, and the Trinity Houses of Quebec and Montreal,

SECTION IV.—List of Light Houses above Montreal, on the St. Lawrence,

No.	No. of Admiralty List, corrected to Jan., '67.		Name of Light.	Locality of Light.	Latitude North.	Longitude West.
				RIVER ST. LAWRENCE.	° ′ ″	° ′ ″
				EASTERN CANADA.		
1	82	Lake St. Francis.	Côteau du Lac	N. shore, at head of Rapids in the Village.	45 16 30	74 11 45
				WESTERN CANADA.		
2	104	Lake Ontario.	Cobourg	Pier head	43 57 0	78 9 0
3	106		Port Hope	Pier-head, E. side	43 56 15	78 15 0
4	107		Darlington	Pier-head	43 52 30	78 38 30
5	108		Oshawa Port	Pier-head..	43 52 0	78 47 0
6	109		Whitby Harbor	W. pier	43 51 0	78 57 0
7	110		Pickering or Liverpool	E. pier-head	43 48 45	79 2 0
8	112		Toronto	Queen's Wharf, western part, the other on arm of pier.	43 8 10	79 23 45
9	113		Port Credit	On the pier	43 33 30	79 35 0
10	123	Lake Erie.	Catfish Creek or Port Bruce..		42 40 0	81 1 0
11	136	Lake Huron.	Collingwood, Georgian Bay..	On breakwater pier, Nottawasaga Bay.	44 31 0	80 2 0

REMARK.—The preceding statements of the Light Houses of Canada have been compiled from Trinity Houses of Quebec and Montreal, and by D. C. Smith, Superintendent of Light Houses on the

OTTAWA, 14th October, 1867.

LIGHT HOUSES OF CANADA,

Works, constructed, in progress of construction, or managed by the Department of and of those in charge of Private Individuals and Companies.

and the Lakes, confided to the care of Harbor Companies and Private Individuals.

Fixed, Flashing or Revolving.	Miles seen in clear weather.	Color or peculiarity of Light House.	Height in ft.—Contre of Lantern above water.	Height in ft. of Building, from base to vane.	When lighted and extinguished.	Year first lighted.	REMARKS.
Fixed	6	On top of a house.	20	14	All night, while navigation is open.	1848	Variation in 1867, 10¼ W.
do ...	8	Square, wood, white.	20	16	do ...	1844	
do ...	4	....	....	....	do ...	....	Red, facing South.
do ...	4	Stone house.....	....	....	do ...	....	White, facing East and West.
do ...	......	....	....	....	do ...	1863	
do ...	5	Square, wood...	12	8	do ...	1844	
do ...	......	....	....	....	do ...	1863	
do ...	......	Wood, square, red.	22	16	do ...	1838	To be passed closely on port hand.
do ...	......	....	....	....	do ...	1863	Red light is on the arm of the pier and innermost.
do ...	......	....	....	....	do ...	....	
do ...	6	....	24	....	....	1858	Red light. Variation in 1867, 2 deg. 28 min. W.

the last Admiralty List, corrected to 1st July, 1867, and from the last returns furnished by the Upper St. Lawrence, in July, September, and October, 1867.—See Nos. 346, 470, 947, 1003.

G. F. BAILLAIRGE.

(No. 470.)

TABULAR STATEMENT OF BUOYS ON THE ST. LAWRENCE.

SECTION No. 1.—Description of Buoys on the River St. Lawrence, under the charge of the Trinity House of Quebec.

POSITION.	Which side of the Channel.	Colour.	Depth of water in fathoms.	MARKS FOR BUOYS.
Pouillier à l'agé, 1¼ mile Point Platon.	South.	Black.	1⅙ low water.	It stands erect about six feet above water.
North extremity of Beaumont shoal.	do	do	4	St. Lawrence Church, north; Point Levi Church, just open, northward of Martinière Point.
West end of Madame Island.	Middle	Red.	5½	St. Vallier Church S. ½ E., a house on the west end of Reaux Island, just open to the northward of Madame Island.
Rock on Quarantine ground.	North.	Checkered black & white	7	North side of the rock, south-west point of Goose Island, W. by S. ¼ S.
East end of Grosse patch.	Middle	White	2½	North side of Margaret Island, N.E. by E. ½ E.
West end of Margaret's tail.	North.	Red	2½	South side of Margaret Island, N.E. by E.
West end of Crane Island shoal.	do	do	3	The two beacons in sugar loaf forms on the south side of Crane Island in one; Middle and Crow Islands in one.
North extreme of bank of St. Thomas.	South.	Black.	3	The red sugar loaf and white diamond beacons on the south side of Crane Island in one, and Haystack Island in one, with the west Point of Crane Island.
South side of Crane Island.	North.	Red	3½	Macpherson house N. ½ E. St. Ignace Church touching the east end of the peninsula.
West end of Beaujeu bank.	Middle	White	3	The two white beacons on Crane Island in one; stone pillar light-house open two or three sails breadth to the southward of Goose Island reef.
Goose Island shoal.	North.	Red	4	Onion Island N.W., south side of Crane Island S.W. ½ W.
East end of the patch east of Beaujeu bank.	Middle	White	3	The beacon on the meadows of Goose Island in one with the Centre of Onion Island; the south side of Crane Island S.W. by W. ½ W.
Channel patch.	do	Checkered black & white	3	The sugar loaf beacon on the beach at high water, St. Jean Port Joli, touching the east end of the Vestry of St. Jean Church.
Patch off St. Jean Church.	South.	Black	3	The beacon in sugar loaf form on the beach at high water, in the parish of St. Jean Port Joli, in one with the steeple of St. Jean Church.
South-west point of Shoals of St. Roch, in the Traverse.	do	do	3	St. Roch Church E. ¼ N., the high rock at the south-west entrance of Goose Island reef open one or two degrees to the northward of the stone pillar.
Middle Shoals of St. Roch in the Traverse.	do	do	3¼	East end of Ile aux Coudres in one with River Eglise, on the north shore, N. ½ W., the wood pillar shut in its own breadth with the south side of Goose Island, S.W. ½ W.

TABULAR STATEMENT OF BUOYS ON THE ST. LAWRENCE.

Section No. 1.—Description of Buoys on the River St. Lawrence, under the charge of the Trinity House of Quebec.—*Continued.*

POSITION.	Which side of the Channel.	Colour.	Depth of water in fathoms.	MARKS FOR BUOYS.
About ½ a cable's length to the northward of the wreck of the steamship *Annette*, in South Traverse.	South.	Green.		
West end of the middle ground.	North.	Red	3	Two beacons in one in the parish of St. Roch, the wood pillar and Goose Island touching.
North west of S. edge of shoal, south-east side of the middle ground.	do	do	2½	The beacon to the southward of St. Roch Church in one with the centre of François Marie Soulard's house.
North-east end of middle ground in the South Traverse.	do	do	3	The steeple of Notre Dame Church, just seen, and in one with a small valley on the mountains of Les Eboulements, and open to the westward of Cape St. Martin, bearing N. by W. ¾ W.
North-East extreme of shoals of St. Roch.	South.	Black	2½	The beacon to the southward of St. Roch Church in one with the west end of François Marie Soulard's house.
North-West of shoals of Ste. Anne.	do	do	2½	Ste. Anne Church, S.-E. ¾ S.; Cape Diable half open to the northward of St. Denis Point.
West end of Hare Island Bank.	Middle	Red	4	Two beacons in one on the east end of Grande Island of Kamouraska, the north sides of Hare Island and Hare Island south reef touching.
North extremity of the Pilgrim.	South.	Black.......	4¼	The west end of Hare Island and the west end of Great Pilgrim in line N.N.W. ¼ W. and S.S.E. ¼ E.; the west end of Brandy Pots and White Island touching.
The knoll at the East end of Hare Island Bank.	North.	Red	3	The south side of Hare Island and the Middle of White Island in one; the west end of Hare Island, N.W. ¼ W.
East end of the middle shoal off the South side of Hare Island.	Middle	White	10 ft.	The square beacon on Hare Island open to the westward of the Brandy Pots, the S.-W. end of Hare Island in one with the summit of Eboulements Mountains.
Barrett's ledge.	do	Checkered black and white.	6	The Diamond beacon on Hare Island in line with the eastern extremity of the Brandy Pots, the south side of the southern-most mountain of Komouraska, in line with the south point of Great Pilgrim Island.
East end of Hare Island, North reef.	do	Black	4	The beacon in the parish of Cacouna open to the eastward of Cacouna church, the south side of White Islet in one with the north side of Hare Island. This beacon open to the westward of the church leads to the eastward of the east end of Hare Island north reef.

TABULAR STATEMENT OF BUOYS ON THE ST. LAWRENCE.

SECTION No. 1.—Description of Buoys on the River St. Lawrence, under the charge of the Trinity House of Quebec.—*Continued.*

POSITION.	Which side of the Channel.	Colour.	Depth of water in fathoms.	MARKS FOR BUOYS.
East end of Red Island reef.	Middle	Red	5½	The south side of Red Islet in one with the north side of Hare Island, the beacon on Green Island open a little to the westward of the Light House S.S.E. ¾ E.
South-East extremity of Red Island reef.	North.	do	5	The beacon on the south side of Red Island in one with the Light House.
West end of Red Islet.....	Middle	do	2½	The Light House on Red Islet E. by N. ⅓ N., the beacon on the north side of Red Islet in one with the S.W. corner of the keeper's dwelling house.
Vaches patch (entrance of River Saguenay).	North.	Black.......	2½	The beacon on Islet Point just open to the westward of the beacon on Rouge Point. Lark Point just open to the northward of beacon on Lark Island.
Outer patch........	do	Checkered black and white.	3	White Island half its breadth shut with the north side of the Brandy Pots, the N.W, Company's houses, in the harbour of Tadousac just shut behind Rouge Point.
South-West extreme of Lark reef.	do	White	4½	Red Island Light House E. ¾ S. the sugar loaf beacon on Rouge Point open two sails breadth to the eastward of the beacon on Lark Island.
North extreme of Prairie shoal.	South.	Black........	3	St. Pierre Church open its own breadth with the east side of St. Paul's Bay N.W. ¼ W., Notre-Dame Church in one with the south part of St. Joseph Point E.N.E.
East end of Brulé Bank...	do	do	3	The west end of Two Heads Island and the west end of Burn's Cape Ledge in one S. ¾ E., Cape Tourmente W. S. W.
North West side of Brulé Bank.	do	do	3	The west end of Two Heads Island and the east end of Margaret Island, touching S. E. by E. ½ E. west end of Grosse Island S. by E. ½ E.
East end of Traverse Spit.	North.	Red	3	The west end of Two Heads Island and the east end of Margaret Island just open S. E. by E. ¾ E., west end of Grosse Island S.S.E.
East end of the West sand.	Middle	Checkered black and white.	3	Patience Island and Two Heads Island, touching E. ¼ S. The west end of Reaux Island, S. ¼ W.
Off the South Pillar Light House.	....	Red	2½	Nearly one cable's length from south or half tide rock, in a N.E. by E. direction.
About half a cable's length to the Northward of the wreck of the Bark Medina.	....	Green	6	East end of Orleans Island, in one with the west end of the large wood in the Parish of St. Joachim.

TABULAR STATEMENT OF BEACONS ON THE ST. LAWRENCE.

SECTION NO. 1.—Description of Beacons in the River and Gulf of St. Lawrence, under the charge of the Trinity House of Quebec.

POSITION.	Which side of channel.	Colour.	REMARKS.
Harbor of Quebec, on the hill in rear of Diamond Harbor.	North.	White	When open eastward of the Martello Tower, forms a mark for the eastern limit of the ballast ground.
Parish of St. Vallier, on the Beach at high water mark	South.	do	When in one with the steeple of the Church, forms a mark for the red buoy on the west end of Madame Island shoal.
Crane Island, on the South Point.	North.	Red.	
Crane Island, about one cable's length to the westward of Red Beacon..	do	White	These two beacons in one form a mark for the red buoy on the western extremity of Crane Island Spit.
Crane Island, one cable's length to eastward of Red Beacon.	do	do	When in one with the red beacon, form a mark for the black buoy on the north extremity of the bank of St. Thomas.
Crane Island, about 1½ cable's length to the south-west of Macpherson's House (2).	do	do	When in one form a cross mark for the white buoy on the west end of Beaujeu bank.
On the Goose Island Meadows (1).	do	do	When in one with Onion Island, forms a cross mark for the white buoy on the patch east of Beaujeu bank.
On the high rock off the S.E. side of the N.E. end of the Island (1).	do	Red	When seen a little open to the southward of the Wood Pillar, will form a leading mark between the shoals of St. Roch and the middle ground in the South Traverse.
Parish of St. Jean Port Joli, on the beach above high water.	South.	White	When in one with the steeple of St. John's Church, forms a mark for the black buoy on St. John's patch, and when touching the east end of the vestry of the same church, forms a mark for the chequered buoy on the channel patch.
Wood Pillar..............	......	do	
Parish of St. Roch (2)....	South.	do	The Diamond Beacon stands to the south-eastward of the other, and when in one, forms a mark for the red buoy on the 3 fathom patch on the north side of the Traverse.
Parish of St. Roch........	do	do	When open its own breadth to the westward of the Church, forms a cross mark for the light ship; when in one with the centre of François Marie Soulard's house, forms a cross mark for the north-east red buoy in the Traverse, and when in one with the west end of Soulard's house forms a cross marà for the black buoy on the northern extremity of St. Roch shoal.
Great Island of Kamouraska (2).	do	1 red, 1 white.	They bear N. ¼ W. and S. ¼ E. of each other, and when in one form a cross mark for the red buoy on the south-west end of Hare Island bank in four fathoms.

TABULAR STATEMENT OF BEACONS ON THE ST. LAWRENCE.

SECTION No. 1.—Description of Beacons in the River and Gulf of St. Lawrence under the charge of the Trinity House of Quebec.—*Continued.*

POSITION.	Which side of channel.	Colour.	REMARKS.
Hare Island	North	White	The one in diamond form, when in one with the eastern extremity of the Brandy Pots, forms a cross mark for the checkered buoy on the west rock of Barrett's Ledge; the square one, when open to the westward of the Brandy Pots, forms a cross mark for the white buoy on the middle shoal, east end of middle bank.
Parish of Cacouna	South	"	When open to the eastward of the church, forms a cross mark for the black buoy on the east end of Hare Island, north reef; when open to the westward of the church, forms a clearing mark for the east end of same reef.
Green Island	"	"	When open westward of Green Island Lighthouse, forms a mark for the red buoy on the east end of Red Island shoal; when in one with the lighthouse, will clear the east end of Red Island shoal.
River Saguenay, Rouge Point.	East	"	When open two sails' breadth to the eastward of the beacon on Lark Island, forms a mark for the white buoy on the S.W. extremity of Lark Reef.
River Saguenay, Islet Point.	N.E	"	When open to the westward of the Rouge Point, forms a mark for the black buoy on Vaches Patch.
Lark Islet	S.W	"	When open to the south of Lark Point, forms a mark for the black buoy on Vaches Patch.
West end of Bic Island (3) viz. :—		1 red, 1 white.	In a S.E. direction from the red; when open to the westward of the red, they form a clearing mark from the westward for the N.W. reef of Biquet.
		White	In a N.E. direction from the cross beacon; when in one with the latter, forms a mark for the Alcide Rock.
Parish of St. Fabien, about 5 miles to the westward of Cape Orignal (2).			The diamond beacon is in a S.S.E. direction from the other; when both are in one, they form a mark for the Alcide Rock.
Island of Anticosti, south point.	Height. 40 feet	"	Lat. 49° 3′ 43″ N.—Long. 62° 16′ W.
Island of Anticosti, Pavillon River.	"	"	Lat. 49° 9′ 45″ N.—Long. 62° 50′ W.
Island of Anticosti, 6 miles east of Salt Lake Bay.	"	"	Lat. 49° 17′ 30″ N.—Long. 63° 16′ W.
Island of Anticosti, Cape St. Mary.	30 feet	"	Lat. 49° 40′ 30″ N.—Long. 63° 55′ W.
North side of the Island of Anticosti, north point.	"	"	
North side of the Island of Anticosti, western extremity of west cliff.	"	"	
North side of the Island of Anticosti, western extremity of Bear Head cliff.	"	"	
Coast of Labrador, (2) viz.			
On summit of Outer Island (1).	"	"	It marks the south-eastern side of the entrance to the harbour of Coacoacho, and bears W.N.W. ½ W. 7 miles from Cape Whittle.
On summit of Whale Island (1).	"	"	It marks the western entrance to the harbour of Bonne Esperance, and bears N.W. by W. ½ W. 18½ from the south point of Green Island Islet, at the entrance of the Straits of Belle Ile.

Certified, E. B. LINDSAY, C. T. H., Q.

[No. 346.]

TABULAR STATEMENT OF BUOYS ON THE ST. LAWRENCE.—*Continued.*

SECTION No. 2.—List of Buoys placed by the Trinity House of Montreal, with description of their position, and whether of Iron or Wood.

POSITION.	Wood.	Iron.
Off Shore, opposite Cap à la Roche	1	
Peak (Pouillier) below Levrard	1	
do above do	1	
At Point Ste. Anne	1	
Rock at Batiscan Traverse	1	
Peak (Pouillier) off Champlain	1	
At the Point of the Gentilly Shoal	1	
To indicate the South of Becancour Church	2	
In the same line	....	1
Peak (Pouillier) opposite Becancour Piver, to the South	....	1
The Flats (Plaquets) to the South of Provencher's Peak (Pouillier)	....	1
To mark line of Becancour Shoal	....	4
The Iron Shoal	1	
The Flats (Plaquets) of the Shoal or Batture aux Pois	1	
Peak (Pouillier) above Point du Lac	....	1
From the Point du Lac to the white buoys	....	5
In the same line	10	
From the white buoys to Light Vessel No. 2	....	4
In the same line	5	
From Light Vessel No. 2 to Light Vessel No. 1	....	3
In the same line	4	
The Shoals or Battures St. Francis	2	
Below Lavaltrie Island	....	1
In the same line	2	
On the bar of Flat Islands	....	1
Above the bar marking the Cut Channel	1	
In the Contrecœur Crossing (Traverse)	6	
In the same line	....	1
At the lower end of Ile Bouchard	1	
Peak (Pouillier) Ile aux Bœufs	1	
do above Point à Méthot	1	
At the lower end of Ile aux Allouettes	1	
To the North of the St. Blaise Mill	1	
To the South of do do	1	
To the North above the point of Ile Bellegarde	1	
To the North below the point of Ile des Lauriers	1	
To the South of the turn of little Cap St. Michel	2	
On the point above Ile des Lauriers	1	
Peak (Pouillier) opposite the five Crosses (Calvaire) Varennes	1	
Below the turn Pointe aux Trembles	1	
On the point of St. Joseph's Island	1	
On the Peak (Pouillier) opposite the Church Pointe aux Trembles	1	
Total	56	23

MEMO.—The small steamer *Richelieu*, employed in the service of the Buoys and Lights, belongs to the Trinity House.

Certified,

E. D. DAVID,
C. T. H., M.

APPENDIX No. 11.

(No. 168.)

REPORT BY D. BOULANGER, SUPERINTENDENT.

DESCRIPTION OF THE RIVER SAGUENAY WORKS.

SLIDE PETITE DÉCHARGE,
June 30, 1867.

F. BRAUN, Esquire,
Secretary of Public Works.

SIR,—I have the honor to acknowledge the receipt of your circular, dated the 15th instant, requiring for the information of the Honorable the Commissioner a report and detailed description of the principal Government works under my charge in this part of the Province. I have also the honor to transmit herewith the required report, which I have made to the best of my knowledge.

The works which are actually under my jurisdiction are situated in the Township of Delisle, in the County and district of Chicoutimi, on the Little Discharge of Lake St. John.

1st. The first works are at the mouth of the "Petite Décharge" of Lake St. John, and comprise four piers, or flat dams, and a weir; the whole being 571 feet in length, and having a mean height of 15 feet.

2nd. About 5 miles below these works, at a place called Rapide Gagnon, in the "Petite Décharge," there are two other dams, or guide piers, having a total length of 348 feet, and a mean height of 15 feet.

3rd. These works comprise, also, a slide of 5,840 feet in length by 5 feet in width, and from 2½ to 5½ feet in thickness. This slide, which is of one piece, built of wood, rests partly on strong and well constructed bents, partly on cribwork, and partly on the ground, according to the nature of the surface. In those places where the slide is only 5 feet or less above the ground it rests on cribwork; but where the height is greater it is supported on bents, the highest of which measure 19 feet. All the works are built of timber, spiked and bolted with iron.

4th. At each extremity, this slide is supported on cribs of 40 feet in length, 25 feet in width, and 12 feet in height. These cribs are filled with stone. The framework on which the slide lies is of white pine timber, 10 to 12 inches square. The bottom is floored with plank 5 inches thick, and the sides are built of plank 4 inches thick. There is also on the posts a capping of 2 inches thick by 14 inches wide.

5th. These works comprise also a boom of 1,344 feet long by 14 inches square, at least. The twenty-nine pieces of this boom are connected by means of $\frac{7}{8}$ chains, with pine cross-heads 6 inches thick and oak stakes 6 inches in diameter. This boom is fixed on the shore of the "Petite Décharge" at each extremity by chains, of $\frac{7}{8}$ and by three guy chains of $\frac{6}{8}$.

6th. Besides the works above detailed, there is also a house or store constructed of wood at the head of the slide as a residence for the Superintendent and his assistant, and also for storing the implements and material necessary for the repairs of the works. This house measures 24 feet square and is one story high.

All these works were commenced in the course of the year 1857 and finished in 1860.

I hope that this report, with those which I have already sent to the Department, will give you a correct idea of the public works on the Petite Décharge of the Saguenay.

I have the honor to be, Sir,
Your obedient servant,

D. BOULANGER,
Superintendent of the Saguenay Slide.

APPENDIX No. 12.

(No. 423.)

REPORT BY H. R. SYMMES, SUPERINTENDENT.

DESCRIPTION OF THE ST. MAURICE WORKS.

SUPERINTENDENT'S OFFICE, ST. MAURICE WORKS,
Three Rivers, July 27, 1867.

F. BRAUN, Esquire,
Sec'y Dept. Public Works, Ottawa.

SIR,—In compliance with your circular of the 15th ultimo, I have the honor to submit, for the information of the Honorable the Commissioner of Public Works, a detailed description, so far as possible, of the St. Maurice Works under my charge, shewing their position, extent, nature of the material used in their construction, state of repair, and such other information connected with the river and its works as may be necessary to convey a correct idea of them.

With the view of more clearly shewing the position and extent of the works as they now are, I have, in giving a written description of the several stations, annexed a rough plan of each. Most of these plans being taken from actual survey and measurement, will be found to be correct.

Before entering into details, a few general remarks in relation to the River St. Maurice and its works may not be out of place.

The St. Maurice, as is well known, is a river of great magnitude. Its extent has never yet been correctly ascertained, but it is generally supposed to drain a territory of more than 20,000 square miles. Its course is generally through a very mountainous country, and such is the rapidity of its current, and the roughness of its numerous falls and rapids, that no works, except those of the most solid and permanent description, can be made to stand. In fact, at certain seasons of the year I consider the river unmanageable, except at the mouth. The St. Maurice differs in this respect from the Ottawa and most other rivers where timber is made. Here but few places are to be found where timber can be stopped or boomed. The slides are never closed. Men work in operating the slides and booms most of the season as much by night as they do by day. Such are the reasons why none but men specially engaged and paid by the Department, making a large item in the account of staff and working expenses, can be trusted to operate these works.

The St. Maurice empties into the St. Lawrence at the City of Three Rivers, by five separate channels, caused by Ile aux Cochon, Ile St. Christophe, Ile Caron, and Ile Bellerive. About 3,000 feet from its mouth it is spanned by two wooden bridges, built in 1842–'3 by the Provincial Government; the one from the west shore to Ile St. Christophe is 1,400 feet, and the one from the island to the east shore is 700 feet in length. On the west shore, opposite the Ile aux Cochon, stand two extensive steam saw mills, now in full operation, known as the "American Mills," and worked by J. K. Ward, Esq.; and on Ile Bellerive is the steam saw mill of G. Baptiste, Esq., together with the lumber yard connected with two other extensive mills owned by Mr. Baptiste, at Grès Falls. Lumber is shipped from the establishments of Messrs. Ward and Baptiste to all parts of the world, with great facility.

The St. Maurice works were commenced in December, 1851, and additions thereto, to a limited extent, have been made nearly every year since. The works, from December, 1851, to 1857, were made under the superintendence of S. J. Dawson, Esq.; those made in 1857, under the superintendence of Edouard Normand, Esq.; and those constructed since that period, under my superintendence.

More new works are much required, particularly on the tributaries, such as the Matawan and Vermilion. The lumber trade on the river is rapidly increasing, notwithstanding the formidable obstructions to be encountered. This would appear to indicate that the resources of the St. Maurice are yet far from being fully developed.

To the foregoing remarks I would add that, when lumber is once out of the tributaries to the main river, and when the spring floods have subsided and the river has become manageable, I consider the St. Maurice a very favorable stream for the descent of logs. They can then be brought down quickly, without injury, and without great expense.

I will now describe the works at the several stations under my charge, commencing with

STATION NO. 1—MOUTH OF RIVER.

This station, being the only one on the river where the water is controlable in extreme freshets, I consider it of much more importance than any of the others. Should the booms here break, most of the timber would be lost; if booms at other stations were to break, or if they could not be extended, but little damage would be the result, as lumber receives no injury in going over the falls in very high water.

The main retaining boom of this station was first [stretched from Ile aux Cochon to Ile Bellerive, directly across the current, and was supported by three piers, as may be seen by referring to the plan No. 1, annexed. It was soon found that a boom so placed could not, by any practicable means, be made to hold. Another and more effective plan was adopted. The new boom was started from about the centre of the N. E. side of Ile aux Cochon, running diagonally across the current about 2,700 feet, striking Ile St. Christophe on the S. W. side; thence commencing at the upper point of Ile aux Cochon, running up the stream 4,700 feet, through the bridge, and striking the west shore of the St. Maurice, opposite McCabe's farm; thence commencing at the lower point of Ile St. Christophe, running 200 feet towards Ile Caron, to a pier in mid channel; thence diagonally up stream, 300 feet, to a pier on the west side of Ile Caron, running up the East channel 2,700 feet, striking the east shore about 700 feet above bridge. These booms are supported by 30 piers in the river, 16 mooring piers and posts on land, 4 anchor piers, and 13 anchors. The principal piers are built of white pine, 12 inch square, open crib-work, and are of the following dimensions:—The bottoms, to the height of 3 feet, are 35 feet square, and covered with 9-inch flatted timber; from thence the crib is 35 feet in length by 20 feet in breadth, the sides having a batter of 2 inches to the foot; the ends are built up vertically, the lower end to 3 feet above high water mark, and the upper end 2½ feet above low water mark, sloping at an angle of about 17 degrees; slope covered with 10-inch timber, and the crib-work bolted at every bearing with iron rag bolts one inch square, and the whole crib filled with stone.

The piers were built in this form for the purpose of allowing lumber to pile upon them, forming a "jam," and thus relieving the booms from a pressure which they would otherwise be unable to resist.

Much of the works being now 15 years old, many of the piers and booms require considerable repairs from year to year.

The works at this station, including the property and effects connected therewith, belonging to the Department, may be briefly described, as follows:—

1st. Piers in river.

2nd. 4 anchor piers, in river.

3rd. 16 mooring piers and posts, on land.

4th. 10,000 lineal feet of wide boom.

5th. 2,350 lineal feet of single boom.

6th. 10,149 lineal feet of chain cable, averaging 1 inch in diameter, and upwards, and weighing about 91,341 lbs.

7th. That portion of Ile St. Christophe, situated below the main road, and containing about 30 acres.

8th. A store house, 24×36 feet, erected thereon.

9th. The whole of Ile Caron, containing about 8 acres.

10th. A piece of land at head of boom, on the east shore, containing about 6 acres, purchased from McCabe.

11th. Store-house erected thereon, 30×50 feet.

12th. 13 anchors, averaging about 8½ cwts. each.

13th. 2 scows and 1 barge, together with the ropes, tools and other effects necessary to operate the works.

STATION NO. 2—GRÈS FALLS.

This station is situated about 17 miles from the mouth of the river. The height of the fall is about 44 feet. The works here consist of a glance boom, 6,000 feet in length, 2,000 feet of which is from 3½ to 4 feet in width, and from 12 to 15 inches in thickness; and the remaining 4,000 feet is a single-stick boom, of white pine timber, from 12 to 20 inches square. It is supported by one mooring pier, 25 × 20 × 15 feet, six anchor piers, 20 feet square, and 10 feet high each, and 160 feet 1½-inch cable chain, 570 feet ⅞-inch chain, 150 feet ⅝-inch chain, 1,300 feet of coupling chains, and one small anchor.

The boom starts from a point on the east side of the river, about 7,000 feet above the falls, running down the stream, gradually crossing the current, to a pier situated near the west shore, about 1,000 feet above Baptiste's Mills. This boom is for the purpose of guiding timber into the channel of the falls, where it will receive the least injury. There is also a side pier of crib-work at the foot of Baptiste's Island, 200 feet in length, to protect timber.

There is also an unfinished crib slide here, on the east side of the falls, but as it was abandoned by the Department about 10 years ago, I have not described it.

The works at Grès Falls require but few repairs. The booms, after once placed in the spring, are easily kept clear by two men during the running of timber.

STATION NO. 3—SHAWENEGAN FALLS.

At this station, situated about 22 miles from the mouth of the river, the works are very extensive, and are second only in importance and usefulness to Station No. 1. The works here were constructed for two purposes: 1st, the conducting of lumber past the falls without injury; and, 2ndly, the power of retaining it below the falls.

The benefits to be derived by being enabled to detain lumber in Shawenegan Bay are as follows:—It operates as a safeguard in case of accident at the booms at the mouth, prevents the accumulation of too large a quantity of lumber in one place, and also enables Mr. Baptiste to separate the logs required for his mills at the Grés Falls, from those belonging to other parties. The Shawenegan works consist of a series of conducting booms (sustained by piers, anchors, and chains), above the falls, to guide the lumber to the head of the slide, to the extent of nearly 9,000 lineal feet. The slide, 600 feet in length, receives the lumber and discharges it at the foot of the falls, in what is called the Shawenegan Bay, where the works are equally extensive, consisting of about the same number of lineal feet of booms as above the falls, and a large number of sloping and other piers. These works are so varied and numerous, that it is impossible, within the limits of a report of reasonable length, so to describe them, as to convey a correct idea of their extent, and how they are situated. A glance, however, at the plan of Station No. 3, annexed, will at once give all the information required.

The sloping piers of the retaining boom, and other piers and works, are built in a manner similar to those at the mouth of the river, already described.

The Shawenegan Falls are about 150 feet in height.

To operate these works, day and night, requires, upon an average, about 16 men.

The property belonging to the Department at this station may be described as follows:—

1st. 18,000 lineal feet of retaining and conducting boom, about one half of which is from 3 to 6 feet in width and from 12 to 15 inches in thickness, and the remainder is from 12 to 20 inches square. A portion of the boom is not shewn in the plan, being spare boom.

2nd. 600 lineal feet of single stick slide.

3rd. 1,075 lineal feet of side dams and piers.

4th. 18 sloping and mooring piers, same as at Station No. 1.

5th. 18 anchor piers now in use, and 15 not in use: latter not shewn on plan.

6th. 10,354 lineal feet of chain (including couplings and spare chains), from ⅝ to 1¾-inches in diameter.

7th. 11 anchors (2 not in use), weighing from 3 to 16 cwt. each.

8th. A house, 30 × 36 feet, a smith's shop and store, 20 × 24 feet, and a stable, 20 × 24 feet, at Shawenegan Bay.

9th. A store-house and shanty, 20 × 30, at the head of the falls.

10th. 4 scows, 3 barges, and the necessary ropes, tools, and rigging to operate the works.

Considerable repairs will be required to the booms above the falls this season.

STATION NO. 4—GRAND-MÈRE.

About 30 miles from mouth of river. The Grand-Mère is a fall of about 40 feet in height, in which there are two channels of about equal size, separated by an island of considerable extent. The fall on the west side is almost perpendicular, that on the east side is of much greater length, and far more gradual. The beauty and magnificence of this fall, and the surrounding scenery, like that of Shawenegan, can hardly be surpassed.

The works here originally consisted of a good substantial slide, over the west side of the island above mentioned, 400 feet in length, and two long conducting booms, 3½ feet wide, and about 1,700 feet in length each. One from the slide extending diagonally across the west channel to a point on the west shore, the other, in like manner, across the east channel to a point on the east shore. It was found, by experience, that most of the lumber which passed through the slide entered a very violent eddy at the foot of the falls, where it received much injury, and where it was taken out with great expense and difficulty. The slide and the boom to the east shore above mentioned were consequently abandoned about seven years ago. The boom from the west shore to the island was retained, and so placed as to throw all the lumber into the east channel, where it passes with less injury and expense. There is also a small but violent eddy at the foot of the falls, on the east side, where timber is somewhat injured at certain pitches of the water, and in 1861, two piers were built from the shore at right angles with the current to destroy it. These piers had not the anticipated effect. They are now in a dilapidated state, and I do not think it would be advisable to repair them. A side pier or wharf along the shore, to keep lumber from the rocks, would be useful.

There are now two single booms below the falls, to keep logs out of the eddy on the west side. One is 676 feet, the other, 878 feet in length. There is also a small single boom at the head of the Hêtres Rapids, four miles below, on the west side, 572 feet in length, not shewn on plan.

Some repairs are required at this station.

It takes nine or ten men to extend the booms and operate them in very high water, after which from two to four are required during the remainder of the season.

The property of the Department, at the Grand-Mère, is as follows:—

1st. 1,552 lineal feet of boom, 3½ feet wide, and from 12 to 15 inches in thickness (100 feet not in use.)

2nd. 2,246 feet of single boom.

3rd. 1 timber slide, 400 feet in length.

4th. 10 anchor piers, 6 of which are not in use.

5th. 2 mooring piers.

6th. 500 feet of side piers and wing dams.

7th. 6 anchors, from 3 to 18 cwt. each.

8th. 2,442 feet of chain, averaging about ¾-inch in diameter.

9th. A house, 30 × 48 feet; hangard, 16 × 24 feet; stable, 12 × 15 feet; all in good repair.

10th. 1 scow, 2 barges, and the necessary tools and implements for the works.

STATION NO. 5—LITTLE PILES.

Thirty-three miles from the mouth of river. The Little Piles has a fall of not over 6 feet, with a deep, narrow channel, on the east shore. The west shore has a bad reef of high, rugged rocks, which formerly gathered large quantities of timber, in high water, and it was with great difficulty and expense that it could be extricated. The works here consist simply of a wing pier dam of crib-work, about 6 feet high and 250 feet in length, running along the upper edge of the reef, to the deep water channel. It is a valuable improvement. No men are here employed. This work is in charge of the boom keeper at the Grand-Mère.

Station No. 6—La Tuque Falls.

One hundred miles from the mouth of the river. The works here consist of retaining booms at head of falls, supported by four mooring piers, and eleven anchor piers. One wing dam in the falls, and six side dams in the eddies at the foot of the falls. They may be described as follows: Upon a point on the west shore of the river, about 1 mile above the head of the falls, is a pier about 20 feet square and 12 feet high. To this pier is attached a boom, mostly 3 feet in width, and about 3,170 feet in length, which gradually crosses the current, running down the stream to an island at the mouth of the river Bostonais. Thence a single boom across the upper outlet of the Bostonais, about 330 feet, supported by a pier on each shore. This retaining boom was made for a double purpose. First, like the Shawenegan boom, as an additional safeguard in case of accident. Secondly, and principally, to detain the lumber coming down from the main river and its tributaries above, until the "drives" are all in; thereby preventing logs from being destroyed by the rocks in the violent eddies, below, and from being floated, when the river overflows its banks, into the woods, "flats," and other inaccessible places.

This boom has hitherto not been of so much service, as it is to be hoped it will be in future, after Plamondon's Eddy is so improved as to detain the ice. Much of the timber is usually past before the boom can be stretched with safety.

The next work below is an extensive wing dam, near the foot of the falls, from the east shore, about 294 feet in length. It was built originally to throw timber passing to the east shore, to avoid one of the violent eddies below. Subsequent works have rendered this dam nearly useless; and as it is now in a bad state of repair, caused by the freshets the past spring, I am inclined to think it had better be abandoned.

At the foot of the fall there are two bad eddies, one on each side of the river. Here the remainder of the works are situated. On the east side is a long pier dam, about 16 feet in height and 622 feet in length, running nearly parallel with the course of the river, across the eddy. It works well, and is a very valuable improvement. There is an opening of 30 feet lift, in about the centre of this dam. From each side of this opening, two side pier dams, averaging about 7 feet in height, and 150 feet in length, run to each bank of the mouth of Quinn's Creek, from which a considerable quantity of logs were taken this season. These side pier dams were constructed the past spring.

On the opposite side of the river are three piers of about 16 feet in height and averaging 125 feet in length, and running from the shore into the eddy, at right angles with the course of the river. They were thus placed to destroy the eddy, but the result has not been satisfactory. The same quantity of dam, placed like the dam on the west side would be a great improvement.

The property belonging to the Department of Public Works at this station is as follows:—

1st. 3,500 lineal feet of retaining boom.
2nd. 4 mooring piers.
3rd. 1,591 lineal feet of wing dams and side piers.
4th. 11 anchor piers.
5th. About 2,000 feet of $\frac{5}{8}$ and $\frac{3}{4}$-inch chain.
6th. 1 house, 24 × 34 feet; 1 hangard; 1 scow; 1 barge; together with the necessary plant for operating the works.

It takes about ten men to extend the booms; after which, but four men are required, apart from the boom keeper, until the timber has passed.

Station No. 7—Plamondon's Eddy.

One hundred and six miles from the mouth of the river. The only works at this station are two piers about 25 feet square each and 25 feet in height. The ice in Plamondon's Eddy accumulates and freezes in the winter season to the thickness of nearly 15 feet. This ice, being grounded on the sand, shoals, until the water is very high, the booms at Latuque cannot be stretched with safety until it has passed. Efforts have been made to detain the ice in the eddy by the construction of the two piers above mentioned. One of these piers was much injured in May last by the mass of ice referred to, and it is believed that two more piers are required before the ice can with certainty be secured.

At this, the last station on the main river, no men are employed, and there is no plant. It is under the control of the boom-keeper at Latuque.

STATION NO. 8—IROQUOIS FALLS—VERMILION RIVER.

One hundred and twenty-five miles from the mouth of the St. Maurice. The works at this station commence about a mile from the mouth of the river, and extend at intervals up the river, 6 or 7 miles. The first is at the head of the Little Vermilion Rapids. It consists of a flat dam about 246 feet in length and 8 feet in height, from the north shore, to an island in the river, throwing all the water into the south channel. On the opposite side is a small dam 55 feet in length and 4 feet high, to another island near the south shore.

Next is a flat wing dam, 80 feet in length and 7 feet in height, in the Big Vermilion Rapids. It extends from the north shore, partly crossing the current. It was constructed to prevent timber jamming on the large boulders below.

Next are the works at the Iroquois Falls. They consist of a slide 550 feet in length with bulkhead dam. Dam across river, opposite slide, 191 feet, one mooring pier, and 1,027 feet of conducting boom. The falls are about 40 feet in height.

About one half mile further up the river, is a retaining boom, 1,650 feet in length, one mooring pier, one anchor pier, two anchors and 2,657 lbs of ½ and ⅝-inch chain.

The property belonging to the Department, at this station, is as follows:—

1st. A timber slide, 550 feet in length.
2nd. 2677 lineal feet of booms.
3rd. 620 lineal feet of side dams and piers.
4th. 2 mooring piers.
5th. 1 anchor pier.
6th. 2,657 lbs. chain.
7th. A shanty and hangard, built of round logs, together with a scow and the usual plant.

Most of the property, at and above the falls, was purchased, early in 1866, from Messrs. Quinn, Gouin, Broster and others, for the sum of $2,695.52. A large proportion of the St. Maurice lumber now comes from the Vermilion.

This year the quantity was so great as to have much effect upon some of the works. I have not yet visited the Vermilion, but from reports received, I am of the opinion that a new slide, or very considerable repairs to the old one, will be required before another season.

In the plans annexed, where a scale is given, the outlines of the river are probably correct, as they are copied from actual surveys.

Many of the works, however, on these plans are located by the eye, and may not exactly correspond with the scale. To avoid any misapprehension on this point, I have had all the booms, dams, &c., measured, and the length of each marked upon the plans. It will therefore be seen that the length of the booms, dams, &c., as marked in figures on the plans, is correct, notwithstanding they may appear more or less, if measured by scale.

I have endeavored to give as minute and correct a description of the works as possible, without incurring much expense.

Respectfully submitting the foregoing,

I have the honor to be, Sir,
Your obedient servant,

H. R. SYMMES,
Superintendent.

APPENDIX No. 13.

(No. 86,043.)

REPORT OF HORACE MERRILL, SUPERINTENDENT.

DESCRIPTION OF THE OTTAWA RIVER WORKS.

Ottawa River Works, Superintendent's Office,
Ottawa, 17th June, 1867.

F. Fraun, Esq.,
Sec'y of Public Works, Ottawa.

Sir,—I have the honor to transmit to the Department, a Description of the Works under my charge, shewing dimensions, &c.

I have the honor to be, Sir,
Your most obedient servant,

HORACE MERRILL,
Superintendent of Ottawa River Works.

CARILLON DAMS.

At Carillon Station, which is 68 miles below this city, an improvement for the running of square timber, sawed lumber, and saw logs, was petitioned for by those connected with the trade, in 1857. It had been found that at certain seasons of the year the water was so shallow on the rapids, that the running of cribs was attended with a great deal of expense and danger. To obviate this, a pier dam, 3,000 feet in length, was constructed, at an expense of $26,563. The effect has been that, since the construction of this dam, the running of cribs at this station is attended with but little difficulty or danger. The object to be accomplished in building this dam, was to prevent the water from spreading over the rapids, and confine a sufficient quantity of it between the dam and the shore, thus forming an artificial channel for the passage of cribs.

Description.—Pier dams, of crib-work, planked on front, and filled with stone; aggregate length, 3,000 feet; average height, 8 feet; width, 18 feet.

SOUTH CHAUDIÈRE.

At the South Chaudiére Station, before the Government made any special improvement for the benefit of the lumber trade, Mr. George Buchanan, in 1832, constructed a slide between what is known as Albert and Victoria Islands, on the one side, and Chaudière Island on the other; but as the trade increased, additional facilities were required, and the Government, in 1845, constructed the series of slides now used. Prior to Mr. Buchanan's enterprise, timber was passed over the Great Chaudiere Falls, and collected in a retaining boom below, opposite the Village of Bytown.

In 1851, applications were made to the Government of the day, for the privilege of using the water-power at this station for manufacturing purposes, and a hydraulic survey was carried out, under the direction of the undersigned. To afford the necessary supply of water, dams and bulkheads were constructed in 1854. The purchasers of the water lots were principally those engaged in the manufacture of sawed lumber, and in no place in this province can their mills be surpassed, either as regards the quantity of lumber cut, or their improved class of machinery. As an evidence of the growth of this industrial branch of business, it may be stated that in 1854, only about 500 saw logs arrived at this station, whereas during this season the supply will not fall very much short of 500,000.

In addition to the saw mills, there are machine shops, grist mills, and a variety of other manufacturing establishments.

An extensive system of boomage has also been carried out at this station, which guarantees the safe running of timber on occasions on which it would be impossible to pass it without these safeguards.

The Union Suspension Bridge, connecting the Village of Hull and the line of wooden bridges extending the connection to the main shore, within the limits of the City of Ottawa, were built in 1843–4, at a cost of $65,448.79.

This bridge is the third thrown across the river at this place. Its predecessors having been of a frail character, were not of long duration. The present structure was erected under the direction of Samuel Keefer, Esq., at that time Chief Engineer of the Board of Works, and is of such a permanent character as to warrant the conclusion that it will last for many years to come. The line of wooden bridges which connect (with the exception of Pooley's Bridge) having been recently renewed, will, in all probability, last for about ten years longer.

List of Works at this Station:

Guide booms for square timber (supported by 6 piers) aggregate length		3,234	feet.
Retaining booms for saw logs (7 piers)		4,389	"
First slide, 26 feet wide,	length	150	"
Second do	"	380	"
Third do	"	278	"
Fourth do	"	66	"
Hydraulic dam	"	2,607	"
Entrance bulkhead and pier dam (12 × 18 feet) for slide,	"	148	"
Three-ply stiff booms, at enterance to first slide	"	957	"
Six " from foot of 1st to head of 2nd slide	"	264	"
Wooden bridge, across head of 2nd slide	"	82	"
Twelve-ply stiff booms, between 2nd and 3rd slide	"	429	"
Double " " 3rd and 4th slide	"	825	"
Stone dam at head of fourth slide, 6 feet high	"	214	"
Pine pier dam, from Coffin to Albert Island	"	66	"
Stone " " to head of Victoria Islands, 10 × 10 feet	"	346	"
Bulkhead, with 6 gates, from Albert to Chaudière Islands, 14 feet high	"	82	"
Bulkhead, 20 feet high from Chaudière Island to main, with store house	"	115	"
Hydraulic dam, flat, 12 feet high, from Chaudière to to Victoria Islands	"	330	"
Wooden bridge, from main land to Chaudière Islands, 25 feet 6 inches wide	"	482	"
Side bridge, from main bridge to Victoria Island, 36 feet wide	"	39	"
Side bridge, from main bridge to Albert Island, 36 feet 8 inches wide	"	105	"
Pooley's Bridge, City of Ottawa, 24 feet wide	"	148	"
Union Suspension Bridge (portion suspended 227 feet), 23 feet 6 inches wide	"	229	"

A stone Toll-house on Union Bridge reserve; a wooden frame station house for slide keeper.

HULL STATION.

At the Hull, or north side of the great Chaudière Falls, the late Philemon Wright, Esq., who was the pioneer in the lumber business on the Ottawa River, in the year 1829 constructed a slide for the passage of timber; and in the year 1849 it was thought desirable that a work of such importance should be under the control of the Government, consequently, Her Majesty, as represented by the Hon. Etienne P. Taché, Chief Commissioner of Public Works, became the purchaser of this slide, for the sum of $40,000. As early as 1806, Mr. Wright lumbered in the Ottawa district, and his was the first raft that floated down this river.

The booms and wing dams at this station are very extensive, and serve the purpose of diverting the timber from the great falls in the immediate neighborhood.

As at Ottawa, on the south side of the river, the water privileges at Hull are made available for manufacturing purposes; they formed a portion of the property of the Wright Estate, and the heirs have recently disposed of them to enterprising capitalists.

WORKS AT THIS STATION.

Guide boom for slide supported by 6 piers	length	2,376	feet.
Stone guard pier at entrance of slide, 10 × 18 ×	"	594	"
Flat wing dam (pine) from guard pier, 5 feet high × ...	"	346	"
Stone pier dam, laid in cement, forming side of Canal leading to slide, 8 × 8 ×	"	280	"
Six-ply boom, from stone dam to head of slide............	"	173	"
Wing pier dam (pine), at head of slide....................	"	99	"
Upper crib slide, 26 feet wide..................................	"	443	"
Lower " "	"	115	"
Wing pier dam, at head of 2nd slide, 9 × 10 ×	"	58	"
Stone dam, from Island to main shore 10 × 18 ×	"	49	"

LITTLE CHAUDIÈRE.

To avoid delays which necessarily took place when the bulk of the timber from the Upper Ottawa arrived at the Du Chêne Rapids, the channel on the northerly side of the river not being so favorable for the running of timber as that on the southerly side, in consequence of which the greater part of the timber found its way into the south Chaudière slide, it was deemed advisable, in 1857, in response to a numerously signed petition by the Ottawa lumbermen, to improve the northerly channel of the river for the descent of cribs, and thus relieve the Ottawa slide of a portion of the timber that would otherwise pass through it. With that object in view, a crib slide was built on the northerly shore of the Little Chaudière Rapids, adjoining the Township of Hull; and at a later date an excavation was made through the rock above the slide, both of which works may be considered as feeders to the slide at Hull. The works at this station are:—

Long guard pier (pine) above Islands, 8 × 10 ×	300	feet.
Single boom, hanging from " and supported by 2 piers...	400	"
Pier dam below Island, 12 × 18 ×	400	"
Crib slide, 26 feet wide.................	140	"
Wing flat dam from Island extending into the river 4 feet high ×	300	"

REMOUS.

The Remous Boom and Piers are situated in the Ottawa River, about four miles above this city. Their construction, in 1857, became a matter of necessity, on account of the frequent breaking loose of bands of square timber and booms of saw logs in dangerous proximity to the rapids below. The usefulness of these works, by way of saving valuable property, since they came into operation, has made itself apparent to those engaged in the Ottawa lumber trade. This is a single boom, supported by five piers; its length is 7,920 feet.

CHATS.

At the Chats Station, 33 miles above this city, a crib slide was built by the late Mr. George Buchanan, to overcome a fall of 42 feet. The Government, for the same reasons that prompted the purchase of the Hull Slide, resumed possession of the slide channel at the expiration of a lease that had been given to Mr. Buchanan by the proper authorities;

and since it came under the management of the Department the works have been rebuilt and very much extended and improved, and this is now the most serviceable slide on the Ottawa.

Works at this place consist of—

Pine guard pier on island at entrance, 10 ft. × 12	175	feet	in length.
Flat dam, 12 feet high, across timber channel, head of Victoria Island	250	"	"
Pine pier, forming entrance Bulkhead, at upper end of Canal, span, 26 feet; height, 12 feet			
Canal leading to slide	1700	"	"
Crib slide—width, 25 feet	350	"	"

HEAD OF CHATS.

At the head of the Chats Rapids, about 3 miles further up the river than the last-mentioned station, three "snubbing," or mooring piers, 18 ft. × 20 ft., were constructed in 1857. Rafts, preparatory to running the rapids, are moored to these piers, and the cribs are detached and passed through this reach of the river as occasion requires. Two of these piers were damaged this spring by the moving of the ice from the Chats Lake; but repairs cannot be executed until the season of low water.

CHENEAUX.

The Cheneaux Boom is situated in the rapids at the head of Chats Lake, and about 5½ miles below the village of Portage du Fort. It is kept in position by anchor or sunken piers. The growth of the staple trade of the Ottawa, in the direction of the manufacture of sawed lumber, taken in connection with the increased supply of square timber from the higher limits on this stream and its tributaries, rendered the construction of the Cheneaux Boom, in 1860, a matter of necessity. The improvements at this station, with the various alterations, which, from experience, were found necessary in placing the booms, have been the means of turning into a place of safe keeping much valuable property, that would otherwise have been wrecked and scattered over the whole expanse of the Chats Lake during the storms that are of frequent occurrence there. This is a single boom, 6,230 feet in length, and it is attached to four anchor piers.

PORTAGE DU FORT.

At Portage du Fort station, about 55 miles above this city, there are rapids and a fall of 20 feet. At so important a point, the attention of the early lumberers on the river was directed to the removal of this obstruction, and in 1838–9, Mr. Hugh Bolton constructed a crib slide, with that object in view; but his efforts were not crowned with that degree of success that such a laudable enterprise would seem to have deserved, as I am informed that at no station on the river was there greater danger to life and property, than at his slide.

The Spring floods of 1840 displaced the works, but they were re-constructed by Mr. Poupore, sen., in 1841, and by him transferred to the Department, about the year 1845; but whether for a consideration or not, I cannot say.

A new slide was built by the Government in 1852, and its working has been attended with the best results.

Works at this station:

Guide boom, at entrance of slide (100 feet of which is 6-ply and 610 feet double timbers) supported by 4 piers	710	feet in length.
Crib slide (26 feet wide)	350	"

MOUNTAIN.

At the Mountain Station, which is about 6 miles above Portage du Fort, an obstruction to the descent of timber, in the shape of falls and a rapid (20 feet in height) presents itself. In 1843–4, a crib slide was made for the benefit of the lumber merchants. The principle on which it was at first constructed was very defective, and it has since had to be lengthened and improved. A second bulkhead was found, to be a great desideratum, in order to lessen the abrupt pitch when the slide had only one of these appliances. A long guard pier was also built below the outlet of the slide, to neutralize the effects of a strong eddy, or cross current, that materially interfered with the safe passage of timber. The difference between high and low water levels at this place, is about 13 feet.

The works at this station are:

Double guide boom, at head of slide	297	feet.
Pine pier, 14×16, and bulkhead (span)	26	"
Crib slide, 26 feet wide	572	"

CALUMET.

At the Grand Calumet Falls, about 9 miles above Portage du Fort, and 64 miles distant from this city, a formidable difficulty in the way of passing timber existed prior to 1843–4, and the Government, about that period, at a heavy outlay, caused two crib slides and the necessary guide booms to be constructed, in order that cribs might avoid the falls and intricate channels, where the difference of level is as much as 56 feet. Some miscalculations as to the placing of the entrance sills of the slides were made at this station, but these defects have in a great measure been remedied by subsequent alterations and repairs, and much has been done of late years to improve the running of timber, by the lengthening and extension of side and glance piers, between the head of the upper and the foot of the lower slides.

Before the Calumet Slides were brought into operation, the late Mr. David Moor, sen., had obtained permission from the Government to improve the Rocher Fendu Channel, on the opposite side of the Calumet Island. He levied a toll on all timber passing his works, but the lumbermen soon found that the arrangements made for their benefit were not adequate to the requirements of the trade, and on application, made the Government improve the new and more important channel, commonly known as the Calumet Çheniel, as an outlet for the large quantities of timber taken from the forests of the Upper Ottawa.

Mr. Moor's heirs afterwards received compensation on the award of the Provincial arbitrators, because of the opening to the public of the Government Slides at the Calumet, before the expiration of his lease of the Rocher Fendu Channel.

WORKS AT THE CALUMET.

Stiff 6-ply boom, at entrance of slide, supported by pier and heavy anchor	360	feet.
Canal through solid rock, with an average width of 30 feet	300	"
Entrance bulkhead, centre of Canal (span)	26	"
Large basin and by-wash.		
Stiff guide boom, 2-ply, in basin, leading to head of long slide	221	"
Upper crib slide, 26 feet wide	530	"
Guard pier, from foot of upper to head of lower slide, 18×20×...	250	"
Stiff guide boom, 2 ply	80	"
Lower slide, 26 feet wide	126	"
Guard pier, on south side, from foot of slide	420	"
" " north " " "	140	"

JOACHIM.

At the Joachim Rapids, about 140 miles above this city, there is a fall of 28 feet; to overcome this, improvements were commenced in the winter of 1843–4, and during that and the following winters about the sum of $18,000 was expended, but the works being defective, a great part of them was carried away at different times by spring freshets. In 1847–8 the works were reconstructed with some additions, and in the years 1854 and 1861 the entrance to the slide was improved by excavating a channel through the rock. This is the highest point on the river at which Government works have been constructed.

except at the Rocher Capitaine, where the rock was blasted in 1854, with a view of forming a navigable channel for cribs through a rapid which occurs at that place.

WORKS AT THE JOACHIMS.

North (pier) dam of upper silde, 12×16×	140 feet.
South (flat) " 12 feet high —	107 "
Upper slide (26 feet wide)	37 "
Boom between slide (single) supported by 4 piers	990 "
North (pier) dam of lower slide, 12×16×	157 "
South (flat) " " 12 feet high	206 "
Lower slide (26 feet wide)	297 "
Guard pier at lower end of slide, North side 10×12×	123 "
" South "	41 "

GATINEAU.

The Gatineau River is the largest tributary of the Ottawa, and their confluence is at a distance of about two miles below this city. It is a northern stream, about 400 miles in length, and it is estimated that about 9,000 square miles of territory are drained by it.

The Gatineau limits, during the early years of the present century, not only afforded large quantities of valuable square timber, but also immense numbers of saw logs, for the supply of extensive mills on the stream itself, at Hawkesbury, on the Ottawa, and other places. The yield has been continued ever since, and the number of saw logs, especially, has increased to such an extent that nearly 300,000 pieces of that description of timber are annually floated to the Government booms and works at the mouth of the stream. The timber is floated in single pieces from the upper reaches of the river, and is guided through the Gatineau Canal into the safety pond, and thence through a creek to the rafting ground, on the northerly bank of the Ottawa.

The Government improvements are all situated within 1½ miles or so of the mouth of the Gatineau, and were originally constructed in 1848. Since that date, however, they have been, on several occasions, much enlarged and strengthened, in order to keep pace with the rapid growth and extension of the trade on this very important tributary. The works may be described as follows:—

Guide boom (supported by eight piers, average size, 3030×40ft; 700 feet double, 1,300 feet 6 ply)	2,000 feet.
Old Canal (with bridge over it), from river to pond	2,191 "
New do do do	880 "
Division boom in pond (attached to eight anchor piers)	1,953 "
Boom at mouth of creek	185 "
Anchor and floating stage at rafting ground, near junction of creek and Ottawa River	

THE MADAWASKA RIVER,

A most important feeder of the Ottawa, falls into the latter, from the south, at that portion of it known as the Chats Lake, about 40 miles above this city, after a course of about 250 miles.

It drains an area of upwards of 4,000 square miles, and on its banks may be found some of the best white and red pine on the continent.

So vast have been the resources of this valuable territory, that although it has supplied the Quebec and other markets with very large quantities of timber, of first-class quality, for nearly 30 years, the products of its limits or berths, even now, appear to be almost inexhaustible.

The character of the river, throughout a great portion of its length (especially when it is in a state of flood), may be said to be a succession of rapids, falls, swift currents, and strong eddies. To enable them to take their timber to the Ottawa River within a reasonable time, and with as little damage to it as possible, the pioneer lumbermen on the Madawaska, and the smaller streams emptying themselves into it, were under the necessity of constructing temporary river improvements at their own expense.

With the view of having a more effective organization, and better regulations, the Madawaska River Improvement Company was formed, under the River Improvement Act. Their works, for a considerable period, were found very serviceable on the upper reaches of the river; latterly, however, they have fallen into disrepair, and consequently into disrepute.

In the winter of 1843–4, the Government of the Province came to the relief of the trade, and commenced the slides and booms at High Falls, and the dams and piers at Ragged Chute, and made other arrangements for the passage of timber between this point and the mouth of the river, a distance of about 35 miles.

The slide at High Falls failed to produce any good result on the river driving for the first two years, as the bottom was too high to admit of timber being passed through. The Ragged Chute works also failed, and had to be abandoned.

In the winter of 1845–6 their reconstruction was commenced, and after raising the river 12 feet, by a dam at the head of High Falls, a flow of water was procured for the single stick slide, and this formidable obstruction to the descent of timber was overcome. A number of side dams have been constructed further down stream, to flood out dangerous shoals, and prevent the “jamming” of timber in “chenal.” In 1854 a crib slide and system of booms were brought into use at Arnprior.

The timber and saw logs coming down the Madawaska are floated in single sticks until they reach the large retaining boom at the mouth of the river, where the pieces of timber are collected, formed into cribs, and rafted; and the saw logs put into booms for safe driving on the Ottawa, to their places of destination.

THE OPEONGO CREEK

Falls into the Madawaska River at about 106 miles from its mouth. In the winter of 1865–6, this stream was improved by constructing three flat dams, with slides through them, and by repairing and placing of side dams, to afford an increased supply of water, and thus enable the limit holders and manufacturers of timber in this remote region to take the fruits of their industry to market. The improvements spread over a reach of the creek of about 3 miles, are situated between Victoria Lake and the mouth of the creek, and, on an average, are distant about 10 miles from the latter.

The dimensions of the works are as follows:—

1—*At the Mouth of the River.*

Retaining boom (supported by nineteen piers and two anchor piers), 1,291 feet is of double timber 16×16, the balance single	6,265	feet.

2—*Arnprior.*

Safety boom, above bridge	400	“
Wooden bridge over river	182	“
Guide booms, at head of slide	377	“
Dam across river	250	“
Crib slide 26, feet wide	180	“
Guard pier, on west side, below slide	180	“

3—*Flat Rapids.*

Flat dam, on north side	500	“
“ south side	300	“

4—*Balmer's Island.*

Flat dam	116	“

5—*Burnstown.*

Boom, supported by three piers	700	

6—*Long Rapids.*

Dam, with water weir for passing timber.

7—*Springtown.*

Boom, supported by four piers	740	feet.

8—*Calabogie Lake.*

Double boom, supported by two piers	3,040	"
Boom, at foot of lake	600	"

9—*High Falls.*

Main 10-ply guide boom, supported by four large piers	692	"
Dam across head of falls	300	"
Single-stick slide, 6 feet wide, with fall of 60 feet	1,200	"
Boom, supported by piers at foot of slide	355	"
Two dams, below foot of long slide	140	"
Six flat dams, at and near Barrett's Chute	790	"

10—*Ragged Chute.*

Dams on south side, at head of falls	550	"
Pier adjoining head of falls	150	"
Flat dam adjoining pier	77	"
" on north side, at head of falls	80	"
Eddy pier at foot of falls	300	"
Boom between Ragged Chute and High Falls	1,050	"

11—*Boniface Rapids.*

Flat dam, below rapids	10	feet high	× 70	"
" at rapids	10	"	× 100	"

12—*Duck's Island.*

Two flat dams	10	"	× 80	"

13—*Bailey's Chute.*

Flat dam, on south side	10	"	× 180	"
" "	10	"	× 70	"
" north side	10	"	× 150	"

14—*Chain Rapids.*

Boom supported by four piers and three islands, at head of slide.	3,960	"
Single-stick slide, 6 feet wide	250	"

OPEONGO CREEK.

Dam, with slide, 40 × 10 feet	19	feet high	× 80	feet long.
" " "	10.9	"	× 84	"
" " "	16.6	"	× 96	"
Wing dam	5	"	× 39	"
"	6	"	× 50	"
"	5.6	"	× 78	"

COULONGE.

The Coulonge River empties itself into the Ottawa, from the north side, about 80 miles above this city, after a course of 160 miles; it drains an area of about 1,800 square miles. It had been lumbered on for a number of years, but it was not until the single-stick slide, 2,956 feet in length, was built, in the winter of 1864–'5, at High Falls and

Rapids, about 5 miles from the mouth of the stream, that it was possible to take timber of any description past this station, without a very large portion of it being damaged or lost. The local lumbermen had made certain improvements at High Falls, consisting of a single-stick slide, which was badly located, and altogether too short; a guide-boom and piers at the head of the slide, and certain dams in the rapids, below the falls; but although these involved a large outlay, they were only in a very limited degree useful.

For a long distance above High Falls the river is all that could be desired for timber-driving purposes, but some chutes occur, which had to be dammed and improved by the lumbermen. The system of driving in single sticks prevails on this river as on the other tributaries described, and the timber is collected in the retaining boom at the mouth, where it is rafted.

Considerable quantities of very good white and red pine are taken from this river, and doubtless will be for years to come.

The Coulonge works consist of:—

Single-stick slide, 6 feet wide	2,956 feet.
Flat dam, at head of Chute, the average height of which is 6 feet	173 "

THE BLACK RIVER,

From the north, empties itself into the Ottawa, about 9 miles above the mouth of the Coulonge, and near the foot of the Culbute Chenal, which is formed by the Allumette Island dividing the Ottawa River into two channels. Its length is 128 miles, and the territory drained by this stream is about 1,120 square miles.

The works on this stream were undertaken by the late Mr. Poupore, sen., for the purpose of conducting timber past High Falls, near the mouth, and were lately purchased by the Government from Mr. Poupore, M.P.P. They consist of:—

Retaining boom, at mouth of river.

	Length.
Single-stick slide, 6 feet wide, at High Falls, about 1 mile from the mouth	873 feet.
Glance pier, 8 feet high, 18 feet wide	346 "
Flat dam, 5 feet high	135 "
Single-stick boom	877 "
" " across river, about ½ mile above slide	262 "

PETEWAWA.

The Petewawa River, from the south side, has its confluence with the Ottawa, 110 miles above this city. Length, 138 miles; territory drained, 2,200 square miles.

Rapids, swift currents and chutes, are met with on this river, at short intervals, from its head waters to the mouth. It had been lumbered on for many years, and, as was the case on the Madawaska, the manufacturers of timber, in the early history of the trade, had to construct such temporary dams, &c., as their then limited business required. On the main stream of the Petewawa, within a distance of 5 miles from the mouth, 4 single-stick slides, with the necessary dams and guide-booms, were built at Chute's, by the Government, in 1857–8.

The north branch of the stream was afterwards improved at public expense, and two large reservoir dams built at Thompson's Rapids and Cedar Lake, for the purpose of retaining the waters of the chain of large lakes in the neighborhood. The peculiar formation of the bed and banks of the river rendered these steps necessary, and it was found that the Petewawa River, in its natural state, suddenly rose to flood height in spring, and as suddenly subsided; but with the regulating dams referred to the water is retained, and the supply for the raftsmen at the lower reaches is so regulated and controlled as to be let off when it is most required. The south branch of the stream has also been improved by the Government.

An excellent quality of white and red pine is obtained from this stream, but it is only on the upper limits that this description can be obtained in large quantities.

Single-stick driving to the boom at the mouth is the rule here.

The works on the main stream are :—

1—*Mouth of the River.*

Retaining boom, supported by 6 piers	4,000	feet.

2—*First Chute.*

Guide boom, at head of slide, north side	248	“
“ “ “ south side	541	“
Dam, on north side of slide, 10 feet high	118	“
“ south “ “ 10 “	359	“
Single-stick slide, 6 feet wide	563	“

3—*Second Chute.*

Guide boom, at head of slide, north side	332	“
“ “ “ south side	1,169	“
Dam, on north side of slide, 12 feet high	489	“
“ south “ 10 “	287	“
Single-stick slide, 6 feet wide	554	“

4—*Third Chute.*

Guide boom, at head of slide, north side	243	“
“ “ south side	586	“
Dam, on north side of slide, 10 feet high	97	“
“ south “ 10 “	101	“
Single-stick slide, 6 feet wide	1,346	“

5—*Bois Dur Station.*

Flat dam	116	“
Pier dam	10×10×250	“
Single-stick slide, 6 feet wide	250	“
Guide boom	950	“

ON THE NORTH BRANCH.

1—*Half-mile Rapids.*

Flat dam	9 feet high×160	feet

2—*Crooked Chute.*

Flat dam	12 feet high×100	“
Single-stick slide, 6 feet wide	250	“
Guide boom at head of slide	400	“

3—*Series of improvements between Lake Traverse and High Falls, as follows :*

Flat dam	6	feet high	×120	feet.
Do.	4	“	× 86	“
Glance pier	6×10×100			“
Dam	12	feet high	× 70	feet.
Do.	5	“	×130	“
Flat dam	12	“	×100	“
Do.	5	“	×150	“
Do.	5	“	×100	“
Do.	11	“	×150	“
Do.	5	“	×100	“

Guide boom (single), at High Falls		400	feet.
Single-stick slide, " 6 feet wide		480	"
Flat dam, " 10 " high		260	"
4—Thompson's Rapids.			
Dam		188	"
Chenal dam, north shore, 5 feet high		26	"
5—Sawyer's Bay.			
Boom		2,671	"
6—Meno Rapids Lake.			
Flat dam.	9 feet high×	200	"
7—Below Trout Lake.			
Flat dam	9 " ×	160	"
8—Strong Eddy.			
Pier	8 ft. 4 in.×10×	93	"
9—Cedar Island.			
Pier	5×10×	108	"
10—Foot of Devil's Chute.			
Pier	5× 8×	40	"
11—Devil's Chute.			
Wing Pier	8×12×	90	"
12—Elbow Rapids.			
Flat dam	7×	63	"
13—Foot of Long Sault (North).			
Pier	5×10×	130	"
Foot of Long Sault (South).			
Pier	6×10×	50	"
14—Middle of Long Sault (North).			
Angle pier	8×12×	40	"
Middle of Long Sault (South).			
Angle pier	8×12×	60	"
15—Head of Long Sault (North).			
Angle pier	12×12×	23	"
Head of Long Sault (South).			
Angle pier	12×18×	39	"
16—South Shore.			
Flat dam	20×	87	"
South Shore.			
Pier, at back of dam	10×10×	20	"

17—*North Shore.*

Side pier	8×12×184 feet.

South Shore.

Side pier	10×10× 90 "

18—*Cedar Lake.*

Dam	5×407 "

ON THE SOUTH BRANCH.

First slide, 6 feet wide	174 feet.
" dam, 18 " high	150 "
Second slide, 6 " wide	432 "
Third " 6 " "	271 "
" dam, 6 " high	78 "
Fourth slide, 6 " wide	215 "
" dam, 6 " high	100 "
Fifth slide, 6 " wide	75 "
" dam, 7 " wide	60 "
Sixth "	82 "
Seventh slide, 6 feet wide	372 "
Eighth " 6 "	513 "

THE DUMOINE RIVER

Is the highest tributary of the Ottawa that has been improved at public expense; its mouth is 150 miles above this city. Length of river about 120 miles. Territory drained 1,600 square miles. Pine timber and saw logs are obtained from its limits, and from present appearances, the saw log trade will be largely increased.

A Joint Stock Company in 1851–2, by the construction of single-stick slide and booms, improved the DuMoine, and somewhat facilitated the descent of timber.

In 1862–3 the Government enlarged and improved the slides, built dams at chutes and "chenals" on the river, where required, and placed a retaining boom and piers at the mouth of the stream.

The system of single-stick driving is adopted on the DuMoine.

The works are as follows:—

Mouth of River.—Retaining boom, supported by 2 piers, 16×16×16 feet,				600	feet.
Cascade, 1 mile from mouth of river—		Dam	8 feet high	×100	"
		"	8 "	× 86	"
Ryan's Chute, No. 2,	4½ miles.—	Flat dam	10 "	× 75	"
Ryan's Chute, No. 1,	5 "	Side flat dam	10 "	× 60	"
Trois Roche,	6 "	" "	8 "	× 75	"
Patton's Chute	9 "	" "	10 "	×148	"
Outlet of Robinson's lake,	11 "	" "	10 "	× 60	"
Cascade,	14 "	Side dam	9 "	× 60	"
Rapids,	14½ "	Side flat dam	8 "	×140	"
"	14½ "	" "	10 "	×150	"
		" "	8 "	× 70	"

High Falls, 15 miles from mouth:—

Single-stick slide	5 feet wide	×300	"
Two side piers, forming bulkhead of slide, each,	7×10×	30	"
Single guide boom leading to slide		200	"
Three piers to support boom	12×12×	12	"
Flat dam at head of slide	5 feet high	×200	"

At a point about 45 miles from the mouth.—

A flat dam.	8 feet high by	×100	"

THE NORTH NATION BRIDGE.

This is a wooden structure, spanning the North or Petite Nation River, in the County of Ottawa; it was constructed with the view of establishing a more convenient thoroughfare between the thickly settled Seignory of Petite Nation and the adjoining townships, and of doing away with a slow system of ferriage, that afforded the only crossing at that point.

It is a high level bridge, and admits of the passage of steamboats under it without lowering their funnels.

The Bridge was completed in 1856, and has since been handed over to the Municipality.

FARMER'S RAPIDS BRIDGE,

A wooden structure, crosses the Gatineau River, at the above-mentioned rapids, about 3 miles from its mouth. The superstructure forming the three main spans, is supported by four cedar piers, built in the rapids, and filled with stones. The approaches are also supported by cedar piers.

This bridge forms a connecting link between roads in the early settled Township of Hull, leading to the sparsely populated new townships in the rear, and takes the place of a ferry that was established a short distance below it.

The bridge has long spans over the main channel of the river, consequently its piers do not obstruct, or in any way interfere with the descent of timber.

The work was completed in 1866, and handed over to the Municipality of the Township of Hull, to be kept in repair by that body.

THE (BYTOWN) OTTAWA AND PEMBROKE ROAD,

About 90 miles in length, was originally made as a winter road in connection with the Ottawa River works, and to open up the country on the south side of the Ottawa. There are three important bridges on the line, viz., one over the Madawaska at Arnprior, another spanning the Bonnechère River in the Township of Horton, and a third crossing the Mississippi in the Township of Fitzroy.

The road and bridges on being completed, were transferred to the Municipalities in which they are located, and by them have been kept in repair ever since.

I have the honor to be, Sir,
Your very obedient servant,

HORACE MERRILL,
Superintendent of Ottawa Slides.

APPENDIX No. 14.

(No. 132.)

REPORT BY G. W. RANNEY.

DESCRIPTION OF WORKS ON THE TRENT.

F. BRAUN, Esquire, BELLEVILLE, 26th June, 1867.
Secretary of Public Works, Ottawa.

SIR,—In compliance with instructions contained in Circular No. 62,924, to make a general report of the works under my charge, known as the Inland Navigation of the Newcastle District, I have the honor to state, that although the works upon the inland communication were once mostly within the Newcastle District, they are now in several counties, each of which I will designate in order.

Commencing the description at the mouth of the Trent River, I would state that these works are of two classes, viz., those intended for canal, or still water navigation, and those for facilitating the passing of lumber down the Trent River and tributaries. The first works were constructed with the view of making the Trent River and its tributary chain of lakes and rivers navigable to Lake Simcoe from the Bay of Quinté. Dams and locks were built at various points along the line where the greatest distances would be made available, during the years 1837-8-9.

The lumber trade increased very much on this line of waters about the years 1842 and 43; so much so that it was not practicable to get the timber to market in one season without better facilities for getting it down the river To encourage the trade, slides were built to overcome the obstructions that prevented rafting of timber into cribs on the back lakes, thereby enabling each owner to push his timber forward as fast as possible. There are three of these slides, the most extensive works of the kind in the Province. They were built in the years 1844 and 45.

The Scugog River and Lake navigation, which deviates from this line of communication to Lake Simcoe, above described, in a westerly direction from Sturgeon Lake, a distance of 36¾ miles, was made to afford a water communication to a new settlement along the Scugog River and north side of Scugog Lake. This portion of the navigation is now of very great service as an outlet to the settlements north of the Lake. The Port Hope and Lindsay Railway and the Grand Trunk afford a ready communication with Lake Ontario for commerce.

The line of communication by water may be thus described:—Commencing at the Village of Trenton, which is situated at the mouth of the River Trent, on the Bay of Quinté, 12 miles east of Belleville and 4 miles east of the head of the Bay, in the County of Hastings, we proceed up the River Trent and through Rice Lake, the Otonabee River, Clear Lake, Buckhorn Lake, Pigeon Lake, Sturgeon Lake, Scugog River, and Lake Scugog. The distance from the mouth of the River Trent to the head of Lake Scugog (Port Perry) is 190 miles.

The mouth of the River Trent is a sort of a lumbering depôt: all lumber which has descended the river is secured into rafts, vessels, or booms, for various markets

The Government built a Howe truss bridge (1831), on what was then termed the York Road, 570 feet long. This bridge is roofed and has two roadways, each 12 feet wide, between which there is a walk of 5 feet in width. It is now maintained by the municipality.

From the mouth of the river, 9 miles up, is a continuous rapid, 116 feet 5 inches, 9 lines rise, only navigable for rafts or small boats coming down. One mile above Trenton Village is the Grand Trunk Railway crossing, consisting of an iron girder bridge. Along this rapid are grist and saw mills, and one paper mill; indeed, every mile of its distance would afford a good hydraulic power.

At a distance of 8 miles from Trenton Village, is the Village of Frankford, where there is another crossing, consisting of a wooden bridge built by the county.

Widow Harris, or head of Nine Mile Rapids, is a landing-place where rafts are prepared to run the rapids. There were two channels at the head of the rapids, which have been turned into one by a wing dam at the head of the island, built with boulder stones, 1,265 feet long, 10 feet base, 4 feet on top, average 6 feet high. The erection of this dam and removal of boulders at various places along the rapid was for the benefit of the lumber trade.

From the head of the Nine Mile Rapids, to Chisholm's Rapids, 6½ miles, there is still-water navigation, generally deep. At lower entrance of lock it was intended to be 5 feet draft.

CHISHOLM'S RAPIDS.

On lots 7, 8, 9 and 10, concession 8, of the Township of Sidney, County of Hastings, occurs the only rapid intervening between Percy Landing and the head of the Nine Miles Rapids, a distance of 22 miles. Here there is a fall of 8 feet 7 inches 8 lines, and it is one of the points on the line on which the Government deemed it advisable, in 1837, to commence making a canal. The canal was made across a point from the lower end of the rapid to near the head, there joined by a dam across the river, which made still-water navigation at each end of the canal. The length of canal is 2,164 feet above lock and 763 feet below lock; equal to 2,927 feet excavation through bedded limestone. The lock is 133 feet 2 inches by 33 feet, between quoins, of good, substantial hammer-dressed masonry, with ashlar hollow quoins, corners and coping would compare favorably with any work on the St. Lawrence. It has balance beam gates. The dam is a truss-framed structure, 715 feet long, 32 feet base, average 6 feet high. There is a slide for the passage of lumber, 100 feet long, 50 feet wide.

The dam and slide are in good order. The dam should be gravelled, to keep the level of the water more uniform. The lock gates have rotted down, and all the wood work about the locks has gone to decay. No boats ever ran upon this reach, therefore the lock was never used.

There is a grist mill, saw mill, and clothing mill at this station, all doing very good work, and the works afford a good and the only permanent hydraulic power there exists within a radius of several miles.

PERCY LANDING.

This place is in the 10th concession, Township of Murray, County of East Northumberland, 13 miles above Chisholm's. The upper end consists of still water and lower end of 9 miles rapid from Crow Bay. This is where lumber was collected in a boom before the erection of the slides, after driving it down the rapids. The Government built piers and booms in connection with the slides at this place, to collect wrecked cribs and loose timber, but found it too difficult and expensive to be maintained and accordingly abandoned it. Cribs are here banded together, after running from Crow Bay, to go to Chisholm's Rapids.

From Percy Landing to Ranney's Falls is a continuous rapid, 49 feet 8 inches fall, distance 5 miles. A good deal has been done to improve the Raft Channel, in the way of removing boulders, excavating shoals, and building wing dams.

RANNEY'S FALLS.

This is in Lot 9, 5th concession, Township of Seymour, County of East Northumberland. There is an abrupt fall of 14 feet, on the west side, or half the width of the river falls into a chasm about 40 feet wide, so that timber passing over it would reach the rock below and jam; on the east side also is a very strong eddy, where timber received a good deal of injury. It has occurred that the fall was completely bridged with a jam of timber, most difficult and dangerous to be removed. To make this portion of the river navigable for cribs by a slide, was difficult and expensive. The river above the falls was very rapid, requiring the dam to be located 1,100 feet above the falls, and the mouth of the slide about

1,000 feet below the falls. The dam is 414 feet long, 33 feet base, average 12 feet high, truss frame. The slide, from the dam to the falls, 1,102 feet long; from the fall, across a point to the river, 1000 feet long. The slide is located on the west side of the river, mostly along the banks. The river side of the slide is formed by a continuous pier-work, 12 feet base, average 12 feet high. The bank side is faced and pierced. The distance from dam down to falls is floored, 1,102 feet by 33 feet, and also a distance of 390 feet of the lower end below the basin is floored—stop logs and hoisting gear are attached to each side. Above the dam there are guide booms and piers, 1,352 feet long, and three sticks under. These are made very strong to prevent the perilous occurrence of timber and men going over the dam and falls. The side piers and other timbers above water shew symptoms of decay, but they are generally in good working order. A grist-mill and saw-mill is supplied with water from the slide.

CAMPBELLFORD.

This is a small village, 1¼ miles above Ranney's Falls, 34¾ miles above Trenton. The Government built a wooden truss bridge with guide booms at this place in connection with the slide (1844), since then a dam has been built, and a large flouring mill and factories. The bridge is now maintained by the municipality.

FIDDLER'S ISLAND.

A group of islands in the river, where it was difficult to navigate with cribs, in consequence of the crooked direction of the channel and shoal places. To improve the running of timber, wing-dams were built (1848) on each side to make a more direct line and collect the water. The dams are crib-work, about 400 feet in length, filled with stones. The dam on the east side forms a hydraulic power which is now occupied by grist and saw-mills.

MIDDLE FALLS.

These are situated 4 miles above Ranney Falls, in the Township of Seymour, 229 feet, 3 inches 11 lines rise above Bay of Quinté. The falls are a shelving fall for a distance of about 1,200 feet, and commence from the foot of Crow Bay. This was originally a difficult place over which to pass timber; unless in very high water, no cribs could have run the falls. The works consists of dams, slides, piers and booms, stop logs and hoisting gear to pass timber down in cribs. At the commencement of the rapid, at the foot of the bay, were islands; also, at the foot of the falls, the river was one wide space of shelving rock. In putting timber over in single sticks, jams formed on the shallow places of the falls, and on the islands at the foot of the falls. The slide is formed by a course of pier work on river side, with a dam and slide across near the head of the rapid, and dam and slide across near the lower end of the falls, forming a basin, also a long slide to carry down timber over the falls into the river, clear of the island, with guard piers below to guard the cribs off a bluff bank after passing the slide.

The lower dam is a frame truss, 97 feet long; lower slide, 455 by 33 feet. The upper dam is a similar structure, 48 feet each side of the slide, equal to 96 feet; slide, 60 feet long. There are guide booms to each of the slides. At the foot of Crow Bay, in connection with the Middle Falls slide, there is a retaining boom to collect timber and logs and guide them into the east side to the slide. It is a single-stick clamp boom, 2,600 feet long, made of timber 14 by 14 inches, moored to piers at each end. In Crow Bay all lumber passing down is noted for the collection of slide dues. At the head of Crow Bay is the junction of Crow River and Trent, 3 miles above Middle Falls. From the bay up to Heely Falls, 1 mile in a westerly direction, there exists a continuous rapid.

HEELY FALLS.

These are situated 42½ miles from Trenton, on Lots 14 and 15, 12th concession, Township of Seymour. They form the lower end of the reach of still water navigation from Crooks' Rapid. Steamboats can come to this point from Rice Lake. The falls are shelving for a distance of about 750 feet, then an abrupt fall of about 8 feet. There are islands near the head of the falls. The works consist of a dam, slides, and guide booms. The slide is on the north shore, formed by side walls on river side. The bank is faced and piered on the shore side. The lower slide is 360 by 33 feet. A basin exists between both slides of about 713 by 33 feet, with stop-logs and hoisting gear to each slide. Between the two slides, in the basin, is a heavy glance boom, composed of six sticks. The dam is a truss frame structure, 488 feet long, 33 feet base, average 8 feet high.

It serves two purposes: that of making the water of a navigable height to Crooks' Rapids above, and, at the same time, creating the required head water for working the slide. All the slides and works in the Township of Seymour are in good working order, but shew symptoms of decay. The Heely, Middle and Ranney Fall's slides are structures very much exposed to severe pressure at high water, particularly the long side walls. These three stations are the principal works constructed on the whole line of communication for the use of the lumber trade.

At Heely Falls there is a division of the two navigations; that for rafts and that for vessels. There is one reach of navigable water for boats of 4½ feet draught, at low water, from Heely Falls to Crooks' Rapids and foot of Rice Lake, 18½ miles; Rice Lake to mouth of Otonabee River, 12½ miles; and Otonabee River to Whitlaws' Rapids, 19½ miles. At a point 4 miles above Heely's, on the north shore, the Railway from the Marmora Mines comes to the river. The ore is being transported from there to Harwood, on the south side of Rice Lake, a distance of about 26 miles by water, where it is again shipped by rail to Cobourg.

CROOKS' RAPIDS.

This place (now called Hastings) is situated 54½ miles above Trenton. The river divides the Counties of Northumberland and Peterboro', the north side being the Township of Asphodel, County of Peterboro', the south side being the Township of Percy.

The Honorable Mr. Crook first located at this place, on a Government grant, for milling purposes. This is one of the points which was commenced to be canalled (1837). The works consist of a dam, slide, guide boom and piers, lock, and short side cutting of canal; a swing bridge over lock, in connection with road bridge, guard walls and piers. The dam is truss-frame, 253 feet long by 27 feet base, average 7 feet 6 inches high. The slide is on the south side; it is 79 by 33 feet, with stop-logs and hoisting gear; guide booms are attached to the piers on each side, above slide, to guide into the slide. The lock is of cut-stone masonry, 134 by 33 feet between quoins, with solid gates, 6 feet 9 inches lift; 6 feet of water on lower mitre sills; wooden sills; guard walls on river side above and below, the upper one being 131 feet, the lower one 250 feet; swing bridge, 68 feet long by 13 feet wide; road bridge below dam; wooden piers, 5 bents, equal to 338 feet in length; bridge over head-race, 100 feet; whole length of bridge (not including swing), 438 feet, maintained by municipalities. The lock and bridge were repaired last year, but some further improvements are necessary for the convenient management of navigation above and below the lock. There are also boulders above and below that interfere with the navigation. These have been ordered to be removed next low water.

WHITLAS RAPIDS.

These are situated on the Otonabee River, in the Township of Monaghan, County of Peterboro', 93 miles above Trenton, and 1 mile below Peterboro'; their elevation above the Bay of Quinté is 369 feet 6 inches. The works consist of a lock and dam, and is one of the points commenced to be canalled (1837).

The lock is of cut-stone masonry, 133 feet 8 inches × 33 feet, with frame gates; wooden sills, 4 feet of water on lower sill. The dam is a truss frame, and consists of two portions, located in two positions; a side or wing dam, from the wing of the lock, up stream, 323½ feet long, and a cross dam, 160 feet, 27 feet base, average 11 feet high, which joins the former. These works, since the existence of Railways to Peterboro', have not been in use, and therefore have not been maintained. They were intended to make the river navigable to the Town of Peterboro'.

LITTLE LAKE.

This is 1 mile in length. Between the lock and the town there are retaining booms and piers, built to collect timber and logs after running the Nine Miles Rapids. There are three piers, and a single-stick boom about ¾ miles long. Boats formerly used to go up to the town.

PETERBORO' BRIDGE.

This is placed across the Otonabee River, in the Town of Peterboro'. The construction is Howe truss, and consists of two spans, 264 feet long and 18 feet of roadway, with side walk outside. By statute, the portion of this line of communication between Peterboro' and Buckhorn is not under the control of the Department; the parts over which the Government have control consists of Scugog Lake and River, Sturgeon Lake, Fenelon River, to the Falls, Bobcaygean Rapids, Pigeon Lake, Chemong Lake, Buckhorn Lake and Rapids, Otonabee River, from the Town of Peterboro' to its mouth, Rice lake, and River Trent, to its mouth. The rivers and lakes between Peterboro' and Buckhorn Rapids are only navigated by rafts and small portable boats.

The route may be thus described: a continuous rapid to Ketchiwannoe Lake, 9 miles long, and of 142 feet 5 inches 3 lines rise. Several extensive mills and factories are built upon this rapid. At the head is the Village of Lakefield; Ketchiwannoe Lake 5 miles to Young's Rapids, having 3 feet rise; the foot of Clear Lake, 109 miles from Trenton, having 517 feet rise.

CLEAR AND STONY LAKES,

Being 8 miles to Burleigh Falls, having 25 feet 8 inches 3 lines rise. (At Burleigh Falls a good deal of money has been spent by the lumber trade to improve the navigation for the passing of lumber): Love Sick Lake, 1 mile; Love Sick Rapid, ¼ mile; Deer Bay Rapid, ¼ mile 2 feet 2 inches rise; Dear Bay, 4 mile; Little Buckhorn Rapid, 1 foot 6 inches rise; Buckhorn Rapids, 8 feet 2 lines rise. The total length above Trenton being 125 miles, and the total elevation being 549 feet 3 inches.

BUCKHORN WORKS.

Buckhorn works form another division of the communication. The dam regulates the whole surfaces of Buckhorn, Chemong and Pigeon Lakes, up to Bobcaygean Lock, 555 feet 4 inches rise above Bay of Quinté. These lakes are navigated by five steamers, occupied mostly in towing lumber to Lindsay. The works consist of dam, slide, guide booms, piers and bridge. The dam is a truss frame work, 387 feet long, 25 feet base, average height 5 feet, with stone walls at each end to prevent water from running round the ends, are 173 feet long, base 8 feet, the slide 65 feet by 33 feet, with stop logs and hoisting gear. The bridge is built on the dam. Bents framed to fit slope of dam. There is a 12-feet roadway 600 feet long, which connects the Townships of Smith and Harvey in the County of Peterboro'. The distance is 22 miles by road from Peterboro'. Mr. Hall was the first occupant of this place, and built a saw-mill. There is now an extensive gang-mill, manufacturing seven million feet of lumber yearly.

BOBCAYGEAN,

(The Indian name for many rapids), is situated in the Township of Verulam, in the County of Victoria, 15¾ miles above Buckhorn, 140¾ miles above Trenton; there is about a mile of river between Pigeon and Sturgeon Lakes, several channels formed the outlet of Sturgeon Lake. The first improvement made at this place was a wooden lock (1835), by County Commissioners, to connect the lakes. In 1857 and 8, the lock and works were renewed; they consist of dams, lock canal, bridges, guard piers, mill races and slides. The dams extend from island to island, in all 1,262 feet of truss and crib work, average 12 feet base, and 6 feet high. The lock is composed of cut-stone masonry, 134 feet by 33 feet, 7 feet 3 inches lift, with solid timber gates, wooden sills. There is a grist mill, head-race of cut-stone, 141 feet by 12 feet, also a saw mill, head-race of cut-stone, 60 feet by 45 feet. The canal above lock is faced and floored with timber and plank, 975 feet; guard piers below lock, 130 feet; swing bridge over canal, 65 feet long; 13 feet roadway. In 1845, three truss bridges were built by the Government, but since renewed by the local municipalities. There are two slides, one for the passage of timber, the other in the little Bob Channel, for passage of saw logs. They are not floored; they have stop logs and hoisting gear. There are five boats plying through this lock, one for passenger traffic from Lindsay to Bridgeworth, on Chemong Lake, within 7 miles of Peterboro. A large quantity of lumber is manufactured by Mr. Boyd, at the mill, which is fed from the canal. The grist mill is also fed from the canal. Each boat generally tows two large scows, carrying between 50 and 60 thousand feet of timber each.

STURGEON LAKE.

This has an elevation of 560 feet 9 inches 4 lines above the Bay of Quinté, and is navigable throughout. The Fenelon and Scugog Rivers empty into it. The Fenelon River is on the north side, and navigable up to the falls, about 1 mile from the mouth, about 14 miles from Bobcaygean. At the falls are extensive saw mills and grist mill. Scugog River enters the lake at the west end, 12½ miles from Bobcaygean. The Scugog River, from its mouth to Lindsay, 8 miles, is very crooked, but deep. Three cuts across short turns were made to improve its direction, but was very injudiciously laid out, and requires improvement. The traffic now upon the river would warrant a further expenditure, to obviate the difficult navigation for towing scows and rafts to Lindsay from the lower lakes.

TOWN OF LINDSAY.

This is the County Town of Victoria, and is situated 161¼ miles above Trenton· 562 feet 3 inches 4 lines elevation above the Bay of Quinté, at foot of slide or old lock, The old wooden lock, built (1844), 131 by 32 feet 6 inches, 8 feet lift, became entirely out of repair, and requires to be renewed, to maintain a through navigation. The Port Hope and Lindsay Railway was in operation at the time, and had its terminus at Lindsay, consequently, it was thought an unwarrantable expenditure to renew the lock, for the amount of through traffic then existing, and the old lock was converted into a slide, for the passing of lumber from Scugog Lake and tributaries. The upper portion of the river and lake is now navigated by two steamers, which ply between the head of Scugog Lake and Lindsay, a distance of 28¾ miles, bringing freight to and from the railway station. The Lindsay station is an important one. There are now four trains a day, loaded with lumber, from Lindsay to Port Hope. The works consist of dam, slide and road bridge. The dam is 280 feet long, 30 feet base, average 9 feet high, truss frame structure, slide 54 by 33 feet. The lower part of the upper gates forms the breast of the slide, the sides faced with timber, the lower gates removed. The bridge is composed of cut-stone piers, 3 spans truss bents, queenposts, whole length 172 feet, and 18 feet roadway, with 4 feet sidewalk. The up stream side is maintained by the local municipality. The navigation of the river above Lindsay is like that below, and as is generally the case with such sluggish streams, through a low flat country, very crooked, but of good depth of water up to the foot of the lake, 9 miles from Lindsay. At the foot of the lake there are bogs, which shift, and make the navigation difficult at times, and the lake at different points will not afford more than 4 feet navigation at low water. At the head of the lake (Port Perry), there are three extensive steam gang saw mills, shingle factories, grist mills, and stave factories, which forward their products to Lindsay Railroad. The townships adjoining the lake and river constitute the best agricultural portion of the Province I have seen, and it is not improbable that a railroad will be built from Port Perry to Whitby, when the lock at Lindsay will be required to be renewed.

The works upon the upper section are in passable working order, some of them requiring repairs where decay has weakened them, and the weir requires replacing. I would also state that the importance of this upper section of navigation is every year becoming more apparent. The chain of rivers and lakes extending in various directions renders it accessible to a large tract of country, and the steady improvements made with the increased population warrant the necessary outlay for its maintainance, and are much more satisfactory than could have been anticipated five years ago.

All of which is respectfully submitted.

I have the honor to be, Sir,
Your obedient servant,

G. W. RANNEY,
Superintendent Trent Works.

APPENDIX No. 15.

(No. 943.)

GENERAL STATEMENT BY G. F. BAILLAIRGÉ.

DESCRIPTION OF THE WORKS ON THE RIVER TRENT DISTRICT.

Department of Public Works,
Ottawa, 28th September, 1867.

F. Braun, Esq.,
Secretary of Public Works.

Sir,—The following statements, which I have been requested to furnish, shew the nature and extent of the Government Works and of the Water Communication on the River Trent and its tributaries; also, the profile of the Inland Water Communication proposed by N. H. Baird, C.E., in 1836, from Rice Lake to Lake Huron.

I have the honor to be, Sir,
Your most obedient servant,
G. F. BAILLAIRGÉ.

Works on the River Trent and its Tributaries.—Table of Distances and Levels.

NAMES OF PLACES.	Distances in miles.		Length of River & Lake, in miles.		Levels.			
	Intermediate.	Total from mouth of Trent.	Navigable.	Unnavigable.	Intermediate rise.		Total rise above Bay of Quinté.	
	Miles.	Miles.	Miles.	Miles.	Feet.	In.	Feet.	In.
From Kingston to the mouth of the River Trent......	67	67	67	....	....	......	....	......
Mouth of Trent to Widow Harris' Rapids..............	9	....	1	8	116	$5\frac{9}{12}$	116	$5\frac{9}{12}$
Widow Harris' Rapids to lock at Chisholm's Rapids...	6½	15½	6½	....	....	......	116	$5\frac{9}{12}$
Chisholm's Rapids to Percy Landing.....................	13	28½	13	....	8	$7\frac{8}{12}$	125	$1\frac{5}{12}$
Percy Landing to head of Ranney's Falls..............	5	33½	....	5	49	8	174	$9\frac{5}{12}$
Head of Ranney's Falls to Campbellford..............	1¼	34¾	....	1¼	54	$6\frac{6}{12}$	229	$3\frac{11}{12}$
Campbellford to Fiddler's Island........................	1¼	36	....	1¼				
Fiddler's Island to foot of Middle Falls..................	1½	37½	....	1½				
Foot of Middle Falls to Crow Bay	½	38	....	½	46	$2\frac{9}{12}$	275	$6\frac{8}{12}$
Crow Bay to Junction of Trent River..........	3	41	3	....				
Junction of River Trent to foot of Heely's Falls...	1½	42½	....	1¼	....	......	275	$6\frac{8}{12}$
Foot of Heely's Falls to foot of Crook's Rapids........	12	54½	12	½	76	$11\frac{5}{12}$	352	$1\frac{1}{12}$
Intermediate rise on the various reaches between the rapids from mouth of River Trent to Rice Lake..	....	....	....	....	4	$3\frac{11}{12}$	356	10
Foot of Crook's Rapids to foot of Rice Lake.	6½	61	6½	....	8	2	365	0
Foot of Rice Lake to outlet of River Otonabee......	12½	73½	12½	....	....	......	365	0
Outlet of River Otonabee to head of Whitlaw's Rapids	19½	93	19¼	....	4	6	369	6
Head of Whitlaw's Rapids to head of Little Lake.....	1	94	1	....	147	6	517	0
Head of Little Lake to Peterborough Bridge.........	¾	94¾	½	¼				
Peterborough Bridge to foot of Clear Lake............	14¼	109	5	9¼				
Foot of Clear Lake to foot of Buckhorn Rapids.....	16	125	7	9	32	2	549	2
Foot of Buckhorn Rapids to foot of Bobcaygean Rapids	15¾	140¾	15¾	....	6	2	555	4
Foot of Bobcaygean Rapids to outlet of River Scugog.	12½	153¼	12½	....	5	$5\frac{4}{12}$	560	$9\frac{4}{12}$
Outlet of River Scugog to Slide at Town of Lindsay..	8	161¼	8	....	1	6	562	$4\frac{4}{12}$
Slide at Town of Lindsay to foot of Lake Scugog....	9	170¼	9	....	8	0	570	$3\frac{4}{12}$
Foot of Lake Scugog to head of Lake Scugog.........	19¾	190	19¾	....	....	......	....	......
Total from mouth of River Trent, Bay of Quinté, to Port Perry, at head of Lake Scugog..........	....	190	152¼	37¾	....	......	570	$3\frac{4}{12}$

THE PUBLIC WORKS at the various Stations on the River Trent and its tributaries, the elevation of the water at each station above the Bay of Quinté, at the mouth of the Trent, the length of navigable and unnavigable water, together with the Distances from one station to the other, may be described as follows:—

	Length.	Breadth.	Height.	
	Feet.	Feet.	Feet.	Inches.
AT TRENTON,				
Which is at the mouth of the Trent, on the Bay of Quinté, 76 miles above Kingston. A bridge of arch and truss work, with a drawbridge across the River Trent; superstructure and piers of timber, completed in 1831, and afterwards placed under the charge of the local municipality. Dimensions of bridge, which is roofed and covered in on the sides	570	29		
WIDOW HARRIS' RAPIDS,				
9 miles above mouth of Trent.				
Elevation of the Trent at the head of Widow Harris' Rapids, above the Bay of Quinté	......	......	116	$5\frac{9}{12}$
9 miles of continuous rapids from mouth of Trent up to Widow Harris' Rapids, run only by rafts.				
Stone dam, built in 1844, across part of the river, at head of an island, about 4 feet wide at top, 10 feet wide at base, and 6 feet in height, made of boulders.	1265			
There is a landing place here where rafts disband previous to running the rapids. At the landing the Government own a lot of land which is occupied by squatters. Land should be surveyed, and boundaries ought to be properly established.				
CHISHOLM'S RAPIDS,				
15½ miles above mouth of Trent.				
Elevation of the Trent at the foot of Chisholm's Rapids, above the Bay of Quinté	......	......	116	$5\frac{8}{12}$
River navigable for boats of 4½ feet draught of water, at low water, from Widow Harris' Rapids to foot of Chisholm's Rapids, for 6½ miles.				
Land belonging to Government at this station should be surveyed and boundaries ought to be properly established. It is now under lease.				
Canal above lock, completed in 1844	2164			
Do below lock, do do	763			
Lock of masonry, do do	133⅙	32½		
Lift of lock	......	......	11	
Depth of water on lower mitre sill of lock	......	......	4	3
Dam of truss work, about 6 ft. in height, completed in 1839	715	......		
Slide, with 2 ft. draft of water, completed in 1843	100	50		
The gates of this lock are decayed.				
PERCY LANDING,				
28½ miles above mouth of Trent.				
Elevation of the Trent at Percy Landing above the Bay of Quinté.	......	......	125	$1\frac{5}{12}$
River navigable for boats of 4½ feet draught of water, at low water, from Chisholm's Rapids to Percy Landing, for 13 miles.				
The piers and booms constructed at this station in 1844 are no longer in use, having been either carried away by floods or removed elsewhere on account of the expense of maintenance.				
RANNEY'S FALLS,				
33½ miles above mouth of Trent.				
Elevation of the Trent at the head of Ranney's Rapids, above the Bay of Quinté	......	......	174	$9\frac{5}{12}$

THE PUBLIC WORKS at the various Stations on the River Trent, &c.—*Continued.*

	Length.	Breadth.	Height.	
	Feet.	Feet.	Feet.	Inches.
RANNEY'S FALLS—*Continued.*				
Continuous rapids from Percy Landing to Ranney's Falls, run by rafts for 5 miles.				
Lower slide, with 2 feet draught of water, completed in 1845	390	33		
Upper do do do	1102	33		
Dam of truss work, about 12 feet in height and 33 feet broad, at base, completed in 1844	414			
Guide booms of 3 sticks of timber	1352	3½		
CAMPBEELFORD (SEYMOUR),				
34¾ *miles above mouth of Trent.*				
Elevation of the Trent at Campbellford, above the Bay of Quinté, not ascertained. (See Middle Falls.)				
Continuous rapids from Ranney's Falls to Campbellford, for 1½ miles, run by rafts.				
Queen-post Bridge, now under control of Township Council of Seymour, completed in 1844	348	18		
Guide booms, completed in 1844	1100	3½		
FIDDLER'S ISLAND,				
36 *miles above mouth of Trent.*				
Elevation of the Trent at Fiddler's Island, above the Bay of Quinté, not ascertained. (See Middle Falls.)				
Continuous rapids from Campbellford to Fiddler's Island, run by rafts, for 1¼ miles.				
Wing dam of crib work, about 14 feet broad, at base, and 6 feet in height, completed in 1848	300			
Cross-dam of crib work, about 14 feet broad, at base, and 12 feet in height, completed in 1848	100			
MIDDLE FALLS,				
37½ *miles above mouth of Trent.*				
Elevation of the Trent at foot of Middle Falls, above the Bay of Quinté	....	....	229	$3\frac{11}{12}$
Continuous rapids from Fiddler's Island to Middle Falls, for 1½ miles, run by rafts.				
Lower slide, with 2 feet draught of water, completed in 1844	455	33		
Upper do do do	60	33		
1st or lower dam of truss work, do do	97	av. 25	av. 12	0
2nd dam do do do	48	" 20	" 7	0
3rd or upper do do do	48	" 20	" 7	0
Wing dam of crib work, do do	637	" 8	" 5	0
FOOT OF CROW BAY.				
38 *miles above mouth of Trent.*				
Elevation of Trent at foot of Crow Bay, above the Bay of Quinté. Not ascertained. (See Junction of River Trent and Crow Bay.)				
Continuous rapids, run by rafts, from foot of Middle Falls to foot of Crow Bay, ½ mile.				
Single-stick retaining boom	2600	$1\frac{2}{12}$		
Measurement of rafts made in Crow Bay, and account of the same, kept for collection of slide dues.				
Whilst the timber is running from Crow Bay to Percy Landing, the slide dues are collected or bonds are taken for the payment of the same.				

The Public Works at the various Stations on the River Trent, &c.—*Continued.*

	Length.	Breadth.	Height.	
	Feet.	Feet.	Feet.	Inches.
JUNCTION OF RIVER TRENT AND CROW BAY,				
41 *miles above mouth of Trent.*				
Elevation of the Trent at Junction of the same with Crow Bay, above the Bay of Quinté	....	....	275	$6\frac{8}{12}$
Navigable for 3 miles from foot of Crow Bay to Junction of River Trent and Crow Bay; water attains a depth of about 20 feet in this part of the river.				
HEELY'S FALLS,				
42½ *miles above mouth of Trent.*				
Elevation of the Trent at the foot of Heely's Falls, above the Bay of Quinté	....	....	275	$6\frac{8}{12}$
Continuous rapids, run by rafts, for 1½ mile between Junction of Trent with Crow Bay and Heely's Falls.				
Lower slide, 2 feet draught of water, completed in 1844	360	33		
Upper slide, do do	713	33		
Dam of truss work, do do	488	33		
Here the dam is being gravelled in order to render the same water-tight, and thereby raise the water above, towards Crook's Rapids.				
CROOK'S RAPIDS (HASTINGS),				
54½ *miles above mouth of Trent*				
Elevation of the Trent at the foot of Crook's Rapids, above the Bay of Quinté	....	....	352	$6\frac{1}{12}$
Navigable for 12 miles from Heely's Falls to Crook's Rapids, for boats of 4 feet draught of water, at low water. Removal of boulders which obstructed channel along Stewart's Island, ordered to be done in the fall of 1866.				
Canal below lock, completed in 1844	390			
Canal above lock, do	220			
Lock of masonry, do	134	33		
Lift of lock			6	9
Depth of water on lower mitre sill of lock	....	....	6	0
Dam of truss work, completed in 1838	253	2à	7	6
Slide, 2 feet draught of water, completed in 1845	97	33½		
Swing bridge across lock, do	84½	13		
Bridge across the Trent below the dam at Crook's Rapids, built of truss work (Queen and King Posts), in continuation of swing bridge, in 1845, at a cost of $4,340	485	18		
This bridge is now under the control of the Counties of Northumberland and Peterborough, who have renewed the superstructure.				
Improvements at lock, above lock and below it, ordered to be done in 1866.				
FOOT OF RICE LAKE,				
71 *miles above mouth of Trent.*				
The elevation of the Trent, from Crook's Rapids to the foot of Rice Lake, is 8 feet 2 inches, but as the intermediate rise of the water on the various reaches between the mouth of the Trent and the foot of Rice Lake is given at $4.3\frac{11}{12}$, this gives for total elevation of Rice Lake above the Bay of Quinté	....	....	365	0
Navigable from Crook's Rapids to foot of Rice Lake for 6½ miles, by boats not drawing more than four feet of water, at low water.				
Boulders obstructing channel between Crook's Rapids and foot of Rice Lake, ordered to be removed in 1866.				

THE PUBLIC WORKS at the various Stations on the River Trent, &c.—*Continued.*

	Length.	Breadth.	Height.	
	Feet.	Feet.	Feet.	Inches.
OUTLET OF RIVER OTONABEE,				
73½ *miles above mouth of Trent.*				
Elevation of Rice Lake at mouth of Otonabee towards head of Lake above the Bay of Quinté........	....	....	365	0
Lake navigated by steamers drawing not more than 4 feet of water, owing to the shallowness of the Trent below, and of the Otonabee above. Distance from foot of Rice Lake to mouth of Otonabee, 12½ miles.				
WHITLAW'S RAPIDS,				
93 *miles above mouth of Trent.*				
Elevation of the Otonabee at the head of Whitlaw's Rapids, above the Bay of Quinté........	....	....	369	0
Otonabee navigated by steamers drawing not more than 4 feet of water, at low water, for 19½ miles from Rice Lake up to Whitlaw's Rapids.				
Canal below lock, completed in 1843........	220			
Canal above lock, do	526			
Lock of masonry do	133⅔	33		
Lift of Lock........	6½			
Depth of water on lower mitre sill of lock........	4			
Wing dam of truss work above lock, completed in 1843........	323½	27	av. 12	6
Cross dam, do do	160	....	" 9	0
LITTLE LAKE,				
94 *miles above mouth of Trent.*				
Lake 1 mile in length, near Town of Peterborough, navigable for boats of 4 feet draught of water.				
3 piers and 1 boom—completed in 1852.				
PETERBOROUGH BRIDGE,				
94¾ *miles above mouth of Trent.*				
The Otonabee navigable to within ¼ mile of bridge, for ½ mile; remainder rapid.				
Bridge across the Otonabee—Howe truss, 2 spans, side trusses covered in, completed in 1847........	264	18		
CLEAR LAKE,				
109 *miles from mouth of Trent.*				
Elevation of the Otonabee at Young's Mills, at foot of Clear Lake, above Bay of Quinté........	....	....	517	0
9¼ miles of continuous rapids from Peterborough Bridge to foot of Lake Ketchiwannoe.				
5 miles of slack water from foot of Lake Ketchiwannoe to foot of Clear Lake.				
BUCKHORN RAPIDS,				
125 *miles above mouth of Trent.*				
Elevation of water at foot of Buckhorn Rapids or at head of Buckhorn Lake, above the Bay of Quinté........	....	....	549	2
7 miles navigable from foot of Clear Lake up to Burleigh's Bridge.				
9 miles of rapids and still water from Burleigh's Rapids to Buckhorn Rapids.				

THE PUBLIC WORKS at the various Stations on the River Trent, &c.—*Continued.*

	Length.	Breadth.	Height.	
	Feet.	Feet.	Feet.	Inches.
BUCKHORN RAPIDS—*Continued.*				
2 slides, 4 dams and several booms have been built since 1852, at Burleigh's Rapids, by lumberers.				
Works at Buckhorn Rapids as follows, viz:—				
Double-stick boom, completed in 1857	300	3½		
Single do do 1865	600	1¼		
Dam of stones, do 1835	173	Base 8	av. 6	0
do of truss work, do 1835	387	do 25	" 5	0
Slide, with 2 feet draught of water, completed in 1857	65	33		
Bridge on bents, completed in 1845, rebuilt in 1857	600	12		
BOBCAYGEAN RAPIDS,				
140¾ *miles above mouth of Trent.*				
Elevation of water at foot of Bobcaygean Rapids, at upper end of Pigeon Lake, above mouth of Bay of Quinté	....	....	555	4
15¾ miles navigated by steamers drawing not more than 4 feet of water. from Buckhorn to Bobcaygean, through Buckhorn and Pigeon Lakes.				
22 miles navigated from Bobcaygean downwards to Bridgenorth, on Chemung or Mud Lake.				
Canal above lock, completed in 1835	973			
Lock of masonry, do 1857	134	33		
Dam of truss work, do 1839	468	av. 25	av. 12	6
do crib work, do 1839	794	" 15	" 6	0
Slide, do 1858	30	33		
Mill race of grist mill, do 1858	141	12½		
Basin do do 1858	35	24		
Mill race of saw mill, do 1858	60	45		
Bridge with king-post truss, do 1845	162	16		
do do do 1845	60	16		
do on bents, do 1845	200	16		
Swing bridge across lock, do 1858	85	13		
Old wooden lock at Bobcaygean was built in 1835, and replaced in 1857 by the new lock of masonry.				
Lift of new lock	....	....	7	3
Depth of water on upper mitre sill	....	....	12	9
Do lower do	....	....	4	9
The king post bridges and the bridge on bents are under the charge of the local municipality, who built the former in 1864-5, and the latter towards 1857.				
The traffic on Buckhorn, Chemung and Pigeon Lakes, consists chiefly in towing lumber from the extensive saw mills erected along those lakes up to the Lindsay Railway Station, *viâ* Bobcaygeon Lock, Sturgeon Lake and the River Scugog.				
OUTLET OF RIVER SCUGOG,				
153¼ *miles above mouth of Trent.*				
Elevation of water at outlet of River Scugog at head of Sturgeon Lake, above the Bay of Quinté	....	....	56	9$\frac{4}{12}$
Sturgeon Lake navigated from Bobcaygeon at foot of lake up to outlet of River Scugog, by the steamers that ply on Buckhorn, Chemung, and Pigeon Lakes. Distance from Bobcaygeon to outlet of Scugog, 12½ miles.				
TOWN OF LINDSAY,				
161¼ *miles above mouth of Trent.*				
Elevation of the River Scugog, at the foot of the slide at Lindsay, above the Bay of Quinté	....	....	562	3$\frac{4}{12}$

THE PUBLIC WORKS at the various Stations on the River Trent, &c.—*Continued.*

	Length.	Breadth.	Height.	
TOWN OF LINDSAY—*Continued.*	Feet.	Feet.	Feet.	Inches.
Navigated for 8 miles from the mouth of the Scugog up to Lindsay by the steamers plying on the above-named Lakes.				
Queen post bridge of 3 spans, on cut-stone piers and abutments, completed in 1864..	171	18		
Foot-walk on side of bridge, 4 feet wide.				
Slide, through old lock at Lindsay, completed in 1859...........	65	33		
The old lack, now converted into a slide, was 131 × 32½ × 8 feet lift, and 4 feet 7 inches of water on the lower mitre sill of the lock. It was constructed in 1844.				
Dam, at head of slide, completed in 1844....................................	280	30	9	0
FOOT OF LAKE SCUGOG, 170½ *miles above mouth of Trent.*				
Elevation of Lake Scugog above the Bay of Quinté.................	....	....	570	3 1/12
River Scugog navigable from slide at Lindsay, for 9 miles up to Lake Scugog, for boats drawing not more than 4 feet of water at low water.				
HEAD OF LAKE SCUGOG, 190 *miles above mouth of Trent.*				
The navigation of Lake Scugog from the foot of the lake up to the head of it at Port Perry is regulated by that of the River Scugog from Lindsay upwards. Distance from foot to head of lake 19¾ miles.				
The total distance from Kingston, by the River Trent and its tributaries, up to Perry, at head of Lake Scugog, is 257 miles.				

GENERAL REMARKS.

The booms, piers, slides and all such portions of the works as are connected with the lumbering operations on the River Trent at Chisholm's Rapids, Ranney's Falls, Middle Falls, Heely's Falls and Crook's Rapids, were transferred to a company formed on purpose for the management and maintenance of those works, with the right of levying tolls thereon, at the rate of five shillings per crib, at each of the slides, except at Chisholm's and at Crook's Rapids, where the works constructed do not facilitate the descent of timber. This rate was altered by an Order in Council, on the 8th December, 1866, fixing the tolls to be levied at Ranney's Falls, Middle Falls and Heely's Falls, at one cent for each log of 13 feet in length, and a proportionate sum on pieces of greater length; and one dollar on each crib of square timber.

The company are not liable for the renewal of the works, in case of their failure from decay of materials, or their destruction by fire, flood or any other cause.

It is their duty to keep an exact account of all the moneys collected by them, and to transmit the same to the Department of Public Works. (See Order in Council No. 1,325, of 20th Feb., 1855, authorizing transfer; also, No. 17,522 of 4th May, 1855, describing works; No. 21,187 of 22nd April, 1857, explaining conditions of transfer; and No. 27,914 of 14th Sept., 1859, establishing rate of tolls to be collected on each crib at each of the slides.

The dimensions of the various works described in the foregoing statement, and which were constructed prior to the Union, and also from date of the Union, on 10th Feb., 1841, to the 31st Dec., 1848, are taken from Appendix N in the Public Works Report of 1848. The dimensions of the works constructed from 1848 to 1866 were furnished by G. W. Ranney, Superintendent of the Trent Works. The description of the navigable and unnavigable portions of the Trent and its tributaries is based on Mr. Ranney's General Report on the Trent Works, of 7th February, 1866.

The rise of the River Trent and its tributaries above the Bay of Quinté, and the distances given from one section to another, from the mouth of the Trent to the head of Lake Scugog, are from a map compiled by F. P. Rubidge, C.E., for N. H. Baird, C.E., in 1836.

Profile of the Inland Water Communication proposed by N. H. Baird, in 1836, from Rice Lake to Lake Huron.

NAMES OF PLACES.	Distance in Miles.		Length of River and Lake in Miles.		LEVELS.			
	Intermediate.	Total from Mouth of Trent.	Navigable.	Unnavigable.	Intermediate rise and fall.		Total rise above Bay of Quinté.	
	Miles.	Miles.	Miles.	Miles.	Ft. Rise.	In.	Ft.	In.
From mouth of Otonabee, at Head of Rice Lake, to Whitlaw's Lock	19½	93	19½	....	1	6	366	6
The Canal at Whitlaw's	⅛	93⅛	⅛	....	3	0	369	6
From Canal at Whitlaw's to foot of rapid, ¼ mile below Peterborough Bridge	1⅜	94½	1⅜	....	....	....	369	6
From Foot of Rapids at Peterborough to foot of Ketchiwannoe Lake, near Herriott's Mill	9½	104	....	9½	144	6	514	0
From foot to head of Ketchiwannoe Lake at Young's Mills	5	109	5	....	....	....	514	0
Rapids from Young's Mills to foot of Clear Lake, 1$\frac{1}{10}$ mile	....	....	....	....	3	0	517	0
From foot of Clear Lake to foot of Peninsula Falls	6½	115½	6½	....	0	11	517	11
From foot of Peninsula Falls to head of Burleigh's Chute	1¼	116¾	....	1¼	27	10	545	9
From Burleigh's Chute, across Deer Bay, to head of Buckhorn Rapids	8¼	125	½	7¾	8	2	553	11
From Buckhorn Rapids, across Buckhorn and Pigeon Lakes, to foot of Bobcaygean Canal	15½	140½	15½	....	1	5	555	4
The Bobcaygean Canal	¼	140¾	¼	....	5	$5\frac{4}{12}$	560	$9\frac{4}{12}$
From Bobcaygean to Cameron's Falls	15½	156¼	15½	....	....	....	560	$9\frac{4}{12}$
Cameron's Falls	¼	156½	....	¼	24	$10\frac{2}{12}$	585	$7\frac{6}{12}$
From Cameron's Falls, across Cameron's Lake, to Balsam Rapids	4¾	161¼	4¾	....	....	....	585	$7\frac{6}{12}$
Balsam Rapids	¼	161½	....	¼	3	$8\frac{6}{12}$	589	4
From Balsam Rapids to head of Balsam Lake	5	166½	5	....	....	....	589	4
Proposed Canal from Balsam Lake down to Talbot River	13¾	180¼	....	13¾	Fall. 118	6	470	10
Talbot River to its mouth on Lake Simcoe	2¾	183	....	2¾				
From Mouth of Talbot River, viâ Lake Simcoe and River Severn, to Gloster Bay, Lake Huron	52	235	....	52	124	10	346	0
Total, from Rice Lake to Lake Huron	161½	....	74	87½	....	....	....	....
Lake Huron above Ontario	....	....	....	....	346	0	....	....
Ontario above Sea	....	....	....	....	234	0	....	....
Huron above Sea	....	....	....	....	580	0	....	....

The preceding profile has been prepared from the reports and plans furnished to this Department by N. H. Baird, C. E.

G. F. BAILLAIRGÉ, C.E.

Ottawa, 28th Sept., 1867.

(No. 85,644.)

APPENDIX No. 16.

Abstract Statement of Trent Slides Account, each year, from 1855 to 1866, both years included, under headings, as below :

DATE.	Management and Staff.		Repairs and Maintenance.		Gross Receipts each Year.		Balance on hand at the end of each year.	
	$	cts.	$	cts.	$	cts.	$	cts.
December 31, 1855.........	951	78	775	11	2,571	20	844	31
" " 1856.........	1,009	55	761	63	2,769	28	998	10
" " 1857.........	970	50	1,775	64	3,222	21	476	07
" " 1858........	962	50	1,184	11	3,216	60	199	99
" " 1859......	850	00	3,143	70	3,993	70	51	28
" " 1860	912	50	2 942	90	5,557	09	1,701	69
" " 1861.........	987	00	2,375	42	4,287	67	925	25
" " 1862.......	982	45	3,882	10	5,535	48	670	93
" " 1863......	1,067	50	2,892	63	6,863	00	2,902	87
" " 1864.......	1,100	12	5,362	88	8,810	85	2,347	85
" " 1865.......	920	62	901	32	5,964	65	4,142	71
" " 1866.......	1,061	75	1,706	49	5,235	78	6,610	25

JAMES CUMMING.

Trenton, 14th May, 1867.

APPENDIX No. 17.

TABULAR STATEMENT

OF THE

SLIDES, DAMS, PIERS AND BOOMS OF CANADA,

DESIGNED FOR THE PASSAGE OF TIMBER TO SEA PORTS;

Shewing the Situation, Dimensions, Cost, &c., of these Provincial Works, constructed, in progress of construction, or managed by the Department of Public Works, and those that have been placed under local management.

N.B.—None of these works are under local management except on the River Trent. (See page 128 of Appendix.)—G. F. B.

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET.			
					Length.	Breadth.	Height.	Draught of water in slides.
RIVER SAGUENAY WORKS.								
Works extend 6 miles from foot of Gagnon's Rapids to foot of Lake St. John.								
Flat dams	...	...	105 to 111.	7	919	...	15	...
Pier dam	On one of the branches of the River Saguenay, called "La Petite Décharge," from Lake St. John.	...		1	40	...	...	...
Glance piers		...	...	2	...	...	...	...
Bulkhead		...	...	1	...	...	...	...
Slide for single sticks		...	...	1	5,840	5	5½ to 2½	...
Boom		...	...	1	1,344	1$\frac{2}{12}$	1$\frac{2}{12}$	...
Store house	...	...	...	1	24	24	...	...
RIVER ST. MAURICE WORKS.								
(*River about* 300 *miles long.*)								
Office of the Superintendent (Wooden Building).	In the City of Three Rivers, a short distance W. from mouth of St. Maurice.	...	...	...	...	...	...	...
AT STATION NO. 1.								
Booms (glance and retaining)	...	...	...	...	12,181	3	...	...
Mooring piers	At mouth of River St. Maurice.	...	...	46	E'ch 25	25	25	...
Anchor piers		...	...	4	" 15	15	8	...
Store houses	...	...	...	2	...	...	...	...
AT STATION NO. 2.								
Boom (glance)	...	...	...	...	6,000	3	...	...
Mooring pier	Grès Falls	44	16	1	25	25	25	...
Anchor piers				6	E'ch 15	15	8	...
Side dam	...	...	...	1	200	25	25	...
AT STATION NO. 3.								
lide for single sticks	...	...	...	1	600	...	...	...
Booms (glance and retaining)	...	...	...	...	18,000	3	...	...
Dams	...	...	...	...	1,075	25	25	...
Mooring piers	Shawenegan Falls	150	20	18	E'ch 25	25	25	...
Anchor piers	...	...	...	33	" 15	15	8	...
Store houses	...	...	...	2	...	...	...	...
Dwelling house	...	...	...	1	...	...	...	...
AT STATION NO. 4.								
Slide for single sticks	...	...	...	1	400	...	...	...
Booms (glance)	...	...	...	...	3,500	3	...	...
Dams and side piers	...	...	...	4	500	25	25	...
Mooring piers	Grand-Mère Falls	40	29	2	E'ch 25	25	25	...
Anchor piers	...	...	...	10	" 15	15	8	...
Dwelling house	...	...	...	1	...	...	...	...
Store house	...	...	...	1	...	...	...	...
AT STATION NO. 5.								
Side dam	Little Piles Falls	6	31½	1	250	...	...	...
AT STATION NO. 6.								
Booms (retaining)	...	...	...	...	3,500	3	...	...
Side dams and piers	...	...	...	...	1,291	25	25	...
Mooring piers	La Tuque Falls	50	100	4	E'ch 25	25	25	...
Anchor piers				11	" 15	15	8	...
Dwelling house	...	...	...	1	...	...	...	...
Store house	...	...	...	1	...	...	...	...

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of placed under local management.

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
1856-7	June 20,'60	41,019 74	200 00	679 00	These works were constructed for the purpose of passing timber from Lake St. John down to the River Saguenay, where it is shipped from Chicoutimi or the Baie des Ha! Ha! to Europe. The River Saguenay flows for a distance of 138 miles, from Lake St. John in the North, into the St. Lawrence at Tadousac, 122 miles below Quebec.
1865...	1866........	402 00			
....	....	....	....	1,818 00	The St. Maurice discharges into the St. Lawrence at Three Rivers, 74 miles above Quebec. The Department owns no land on the St. Maurice, except at the mouth of the River. This land consists of a small lot purchased from Peter McCabe, the deed and plan of which were transmitted to the Department on 12th August, 1858—and one island and a portion of another island purchased from M. Lambert, the deed of which was transmitted to the Department, on 29th May, 1864. A portion of the works at the mouth of the river is still on private property, and those at Grès Falls and Shawenegan are nearly all on private property. The works at the Grand-Mère are principally on unconceded lands of the Crown. Those at "Little Piles" are on private property. The works at "La Tuque," "Plamondon's Eddy" and "Vermilion River," are on unsurveyed Crown lands. The booms are for the purpose of either conducting or retaining the lumber that is floated down the river. The mooring piers are for attaching and sustaining the booms. The anchor piers are for the purpose of keeping the glance booms and conducting booms in their places. The side piers and dams are for the purpose of conducting the lumber into the proper channel or to prevent its injury in the violent eddies. The slides are for the purpose of conducting the floating timber safely over rugged rapids and falls. The dwelling houses are for the residences of slide keepers and the men under their charge. The store houses are for securing and protecting the plant belonging to the works. The booms are from 12 to 20 inches in depth and from 1 to 8 feet in width, or of an average width of 8 feet. The large number of piers at the entrance of the St. Maurice is necessary on account of the rapidity of the current; they are made sloping on the upper side so as to allow the lumber to form "jams" upon them, as without such an arrangement no booms could be made to hold.
1852...	1853.........	....	752 81	1,429 64	
1852...	1854..	....	15 00	113 43	
1852...	1854.........	....	989 03	2,355 34	
1852...	1854.........	....	104 21	839 08	
....	1863........	....	None mark	ed............	
1854...	1855.........	....	315 84	518 28	

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides & Booms.	DIMENSIONS IN FEET.			
					Length.	Breadth.	Height.	Draught of water in slides.
RIVER ST. MAURICE WORKS.—*Continued.*								
AT STATION NO. 7.								
Mooring piers............................	Plamondon's Eddy above La Tuque.....................	......	106	2	25	25	25	....
VERMILION RIVER WORKS. (*Tributary of the St. Maurice—About 90 miles long.*)								
AT STATION NO. 8.								
On a Tributary from N. W. Iroquois Falls, 6 miles above mouth of Vermilion. Works commence 1 mile above mouth, and extend from 6 to 7 miles up the river.								
Booms	....	.....	....	...	2,677	2	....	....
Mooring piers...	....	......	....	2	E'ch25	25	25	....
Slide	....	.....	Verm., 116.	1	550	.....	....	....
Anchor pier......	Iroquois Falls, 6 miles up the Vermilion River.	40	Iroq's, 122.	1	15	15	8	....
Dam and side pier	....	......		...	682	25	25	....
Dwelling house..	....	.....	....	1	....	.....	....	....
Store house......	....	.....	....	1	....	.....	....	....
RIVER OTTAWA WORKS. (*River about 700 miles long.*)								
AT STATION NO. 1.								
Pier dams	Carillon, on N. side of the Ottawa.................	......	27	......	3,000	.....	....	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.
AT STATION NO. 2. (*North side of River.*)								
On the main Trunk of the Ottawa.								
Guide boom for slide, (supported by 6 piers)	....	......	....	...	2,376	......	....	
Guard pier, at entrance of slide	....	......	....	1	594	......	....	
Wing dam from guard pier, extending towards falls	....	.....	....	1	346	......	5	
Stone pier dam laid in cement, from bulkhead to lower side of bridge, forming side of canal leading to slide.	Hull, on N. side of the Ottawa	40	98	...	280	8	8	
Six-ply boom from stone dam to head of slide.	....	......	....	...	173	......	....	
Wing dam at head of slide.... .	....	......	....	...	99	......	....	
Upper Crib slide......................	....	......	....	...	443	26	....	
Lower do	....	......	....	...	115	26	....	
Wing dam at head of 2nd slide	....	.....	....	...	58	9	10	
Stone dam from Island to main shore (10 × 18)......................	....	......	....	...	40	.....	....	

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		REMARKS.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
1866......	In progress	950 92	....	....	The new works, when completed, will consist of four piers placed in such position as to retain the ice in Plamondon's Bay. Only two have been commenced, and they will be completed when further appropriations are made for the works on these rivers.
Since 1858...	1866.........	5,167 08	....	....	The works on the Vermilion River were constructed chiefly by private parties, Broster, Gouin, Quinn, &c., since 1858. In May, 1866, they were purchased, extended and improved by the Government. The cost of purchase was $2,695.52
					The River Ottawa drains an area of about 57,800 square miles.
1857......	1859.........	28,458 13	400 00	392 00	The Carillon Dams were erected in 1860 and 1861.
1829...	1854.........	15,275 00	1,923 00	182 50	*Hull Slide, at Station No. 2*—The slide, originally built at Hull, on the north side of the Chaudière Falls, was constructed in 1829 by the late Philemon Wright, Esquire. It was purchased, together with the right of way along the north bank of the river, by the Government, for a sum of $40,000, on the 6th of October, 1849. In 1861 and 1862 the old slide was removed, and two new slides, sufficiently large to admit cribs, were constructed.

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works,
Public Works, and those that have been placed

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET. Length.	Breadth.	Height.	Draught of water in slides.
RIVER OTTAWA WORKS—*Cont'd.*								
AT STATION NO. 2.—*Continued.*								
On south side of River, or the South Chaudière Works, viz. :—								
On the main trunk of the Ottawa.								
Guide booms for square timber, supported by 6 piers	At the City of Ottawa, on the south side of the Chaudière Falls.	......	......	......	3,234	......	......	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.
Retaining booms for saw-logs, supported by 7 piers	......	......	......	......	4,389	......	......	
1st Slide	......	......	......	......	150	26	......	
2nd do	......	......	......	......	380	26	......	
3rd do	......	......	......	......	278	26	......	
4th do	......	......	......	......	66	26	......	
Main hydraulic dam from head of Chaudière Island to Russell Island	......	......	......	......	1,254	......	......	
Continuat'n of hydraulic dam from Russell Island to Mary Island	......	......	......	......	1,221	......	......	
Continuat'n of hydraulic dam from Mary Island to Amanda Island.	......	......	......	......	132	......	......	
Entrance bulk-head and pier dam for slide (12 × 18)	......	......	......	......	148	......	......	
Stiff booms at entrance to 1st slide.	......	......	......	......	957	......	......	
Do from foot of 1st slide to head of 2nd slide	......	......	98	......	264	......	......	
Wooden bridge across head of 2nd slide		......	......	......	82	......	......	
Stiff boom between 2nd and 3rd slide (12-ply)		......	......	......	429	......	......	
Stiff boom between 3rd and 4th slides (double)	......	......	......	......	825	......	......	
Dam at head of 4th slide	......	......	......	......	214	......	6	
Dam from Coffin to Albert Island.	......	......	......	......	66	......	......	
Stone pier dam from Coffin to head of Victoria Island	......	......	......	......	346	......	......	
Bulk-head from Albert to Chaudière Island	......	......	......	......	82	......	14	
Bulk-head from Chaudière Island to main dam.	......	......	......	......	115	......	20	
Store-house between Chaudière Island and main dam	......	......	......	1	87	19	......	
Hydraulic dam from Chaudière to Victoria Island	......	......	......	......	330	......	12	
Station house, wooden frame work.	......	......	......	1	20	30	......	
Store-house do do	......	......	......	1	23	17	......	
AT STATION NO. 3:								
Guard pier above islands (8 × 10).	At the Little Chaudière, about two miles above the City of Ottawa.	......	......	......	300	......	......	
Boom hanging from do supported by two piers		......	......	......	400	......	......	
Pier dam below island (12 × 18)		......	100	......	400	......	......	
Crib slide		......	......	......	140	26	......	
Span of bulkhead over slide		......	......	......	26	......	......	
Wing flat dam, extending into the river	......	......	......	......	300	......	4	

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
1844...	1860......	58,839 36	2,501 00	1,052 96	*City of Ottawa Slides, at Station No.* 2.—The works on the south side of the Great Chaudière Falls, constructed prior to the Union of the Provinces, by the late George Buchanan, Esq., under a Goverument license of occupation, dated 7th Sept., 1835, for 10 years, consisted of one slide; it occupied the channel which passed between Chaudière Island on one side and Albért and Victoria Islands on the other. The Government assumed possession of the works at this Station after the expiry of the lease in 1845. In the same year Government added four new slides in this place; dams, head gates, booms, &c., have been added since, to facilitate the use of the water power. The four new slides are all brought into use during the low water, and only two during high water.
1845...	1866......	17,816 93	757 00	....	*Little Chaudière, at Station No.* 3.—The works at this station were commenced in 1845-6, under the management of T. C. Keefer, C. E., who then evpended a sum of $3161.62 at this station. The crib slide was built in 1857, on the northerly shore of the Little Chaudière Rapids, adjoining the Township of Hull; and at a later date an excavation was made through the rock above the slide, both of which works may be considered as feeders to the slide at Hull.

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works,
Public Works, and those that have been placed

On the main Trunk of the River Ottawa.

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET.			
					Length.	Breadth.	Height.	Draught of water in slides.
RIVER OTTAWA WORKS—*Cont'd.*								
AT STATION NO. 4.								
Boom, supported by 5 piers.........	At the Remous, 4 miles above City of Ottawa, stretching nearly across the Ottawa River.	......	102	......	7,920	......	....	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide from 2 to 4 feet.
AT STATION NO. 5.								
Guard pier on Island at entrance	....	......	....	...	175	......	....	
Dam across timber channel, at head of Victoria Island.......	....	42	131	...	250	......	12	
Entrance bulkhead at upper end of Canal (pine pier).............	Chats Rapids, about 33 miles above the City of Ottawa.	......	....	...	26	......	12	
Canal leading to slide		......	....	...	1,700	......	....	
Crib slide	....	......	....	...	350	25	....	
Station house........	....	......	....	1	40	32	....	
Store house.....................................	....	......	....	1	48	38	....	
AT STATION NO. 6.								
Piers for snubbing rafts, preparatory to running rapids	At the head of Chats Rapids	......	134	3	20	18	....	
AT STATION NO. 7.								
Boom (supported by 4 anchor piers)	At the Chenaux	......	152	......	6,230	......	....	
Anchor piers as above............	....	......	....	4	....	......	....	
AT STATION NO. 8.								
Stiff guide boom at entrance of slide 100 ft. of 6 and 610 ft. of 2 sticks in width..	At Portage du Fort, about 58 miles above the City of Ottawa.	......	... .	......	710	......	....	
Anchor piers to support boom..		20	156	4	....	......	....	
Crib slide.............		......	....	......	350	26	....	
AT STATION NO. 9.								
Guide boom at head of slide...	At the Mountain, a short distance below Grand Calumet.	......	....	......	297	......	....	
Bulk head................................		20	161	......	....	26	....	
Crib slide........		......	....	......	572	26	....	
AT STATION NO. 10.								
Stiff 6-ply boom at entrance of slide (supported by pier and heavy anchor)	....	......	....	...	360	......	....	
Canal through solid rock........	....	......	....	...	300	30	....	
Entrance bulkhead centre of canal (span).........................	....	......	....	...	....	26	....	
Large basin and by-wash.........	....	......	....	...	....	......	....	
Stiff guide boom in basin, leading to head of long slide......	At the Calumet, which is about 65 miles above the City of Ottawa.	56	163	...	221	......	....	
Upper crib slide....................		......	....	...	530	26	....	
Guard pier from foot of upper to head of lower slide.......	....	......	....	...	250	18	20	
Stiff guide boom, 2 ply..	....	......	....	...	80	......	....	
Lower slide..............................	....	......	....	...	126	26	....	
Guard pier on south side from foot of slide	....	......	....	...	420	......	....	
Guard pier on north side from do.	....	......	....	...	120	......	....	
Station house.............................	....	......	....	1	$36\frac{3}{4}$	$25\frac{3}{4}$	....	

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union. 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
1857...	1858..... ...	4,767 76	202 00	....	*Remous Boom and Piers, at Station No. 4*:—These works were constructed for the purpose of preventing the breaking loose of bands of square timber and booms of saw logs, on account of the dangerous proximity of the rapids below.
Old works 1835. New 1845...	works. 1855.........	23,355 04	992 00	320 00	*Chats Rapids, at Station No. 5*:—The slide at this Station is one of the best constructed and most serviceable on the Ottawa. A great quantity of timber passes through it annually. A crib slide was formerly built at this Station by the late Mr. George Buchanan, under a Government license of occupation, during pleasure, dated 18th Feb., 1835; it was assumed by the Government at the expiration of the lease in 1845, since when the works have been rebuilt, extended and improved.
1857...	1857.........	935 67	39 00	....	*Head of Chats, at Station No. 6*:—These piers are for the purpose of snubbing rafts preparatory to their being run down the Chats Rapids.
1860...	1860.........	4,412 76	187 00	228 00	*Chenaux, at Station No. 7*:—This boom is for the purpose of diverting saw logs from the Steamboat channel, and of preserving in a place of safe keeping much valuable timber that would otherwise be wrecked or scattered over the Chats Lake, during storms.
Old 1838. New 1852...	works. 1839. works. 1863.........	8,467 77	359 00	370 00	*Portage du Fort Slide, at Station No. 8.*—At this Station, the first Crib-slide was erected in 1838–9, by Mr. Hugh Bolton; it was destroyed by the spring freshet of 1840, and was reconstructed in 1841 by Mr. Poupore Senior, who sold it to the Government on the 16th April, 1845, for a sum of $1,700. A new Slide was built by the Government in 1852; and its working has been attended with the best results.
1843...	1854.....	21,866 67	929 00	370 00	*Mountain Slide, at Station No. 9.*—The Slide that was constructed here in 1843 was afterwards found to be too short; it was lengthened and improved between the years 1845 and 1848; further improvements were made in 1852. The difference between high and low water levels, at this place, is about 13 feet.
1843...	1862.........	43.805 17	1,861 00	450 00	*Calumet Slides, at Station No. 10.*—Before the present Slides were constructed, the late Mr. David Moore, Senr., by permission of the government, built a Slide prior to 1843, in the Rocher Fendu Channel on the opposite or south side of the Grand Calumet Island. This gentleman obtained a government license, dated 31st August, 1835, which in consideration of his building and maintaining the Slide, secured him possession of the same for 10 years, at a yearly rent of $1, with the privilege of collecting a toll of 5s upon every Crib of timber that passed down the Slide. This work having been rendered useless by new works constructed by the government, a compensation of $6,000 was awarded by arbitration to the heirs of Mr. Moore, on 15th October, 1861. This is one of the principal stations on the Ottawa, as the timber from the upper portions of the main river and rafts from such important tributaries as the Matawan,

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

	NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET. Length.	Breadth.	Height.	Draught of water in slides.
	RIVER OTTAWA WORKS.—*Cont'd.*								
	AT STATION NO. 11.								
On the main Trunk of the Ottawa.	North dam of upper slide 12×16.	...	...	...	...	140	...	...	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide from 2 to 4 feet.
	Upper slide	...	...	...	...	37	26	...	
	South dam of upper slide	...	...	...	...	107	...	12	
	Boom between upper and lower slides, supported by 4 piers	...	...	...	...	990	...	...	
	Anchor piers to support boom.	...	...	...	...	...	...	...	
	North side dam of lower slide	At the Joachim Rapids, about 151 miles above the City of Ottawa.	28	249	4	157	...	...	
	Lower slide		...	...	...	297	26	...	
	South side dam of lower slide		...	...	...	206	...	12	
	Guard pier at lower end of lower slide on north side 10×12	...	...	...	...	123	...	...	
	Guard pier at lower end of lower slide on south side	...	...	...	...	41	...	...	
	WORKS ON THE TRIBUTARIES OF THE OTTAWA.			Above outlet of Ottawa at Ste. Anne.					
	THE GATINEAU RIVER.								
	(*About* 400 *miles long.*)								
A Tributary from the North.	Boom (1300 feet of it being 6 ply and 700 feet double)	...	...	...	...	2,000	...	...	
	Anchor piers to support boom	...	...	...	8	...	...	...	
	Wooden bridge at head of old canal	...	...	...	...	52	...	...	
	Old canal from river to pond	At about 1½ mile above the mouth of the Gatineau, which flows from the north and discharges into the Ottawa at a point about 96 miles from the mouth of the Ottawa at Ste. Anne, and at about 2 miles below the City of Ottawa.	...	...	...	2,191	...	...	
	New canal with bridge over it		...	...	...	880	...	...	
	Division boom in pond		...	...	...	1,953	...	...	
	Anchor piers supporting division boom		...	96	2	...	...	...	
	Boom at mouth of creek		...	...	...	185	...	...	
	Anchor and floating stage at rafting ground near the junction of the creek and the Ottawa River		...	...	1	...	...	...	
	Natural pond near mouth of Gatineau, communicating with Ottawa River	...	...	...		About 70 acres in area.			
	1 Station house	...	...	...	1		...	...	

DAMS, PIERS, AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	*Calumet Slides.*—Continued from page 139. Du Moine, Petewawa, Black River and Coulonge, escape the Grand Calumet Falls by passing through the works at this station. The new slides were constructed in 1843, and improved in 1845. The lower slide was reconstructed in 1862.
1843	1848 to 1861 inclusive	25,132 90	1,068 00	350 00	*Joachim Slides, &c., at Station No.* 11.—A slide and dam were built in 1843, but were partly carried away by the current in the Spring of 1844; they were rebuilt in in the winter of 1844-5; another portion was destroyed by the Spring freshet of 1845; the works remained in this state until the winter of 1846-7, when they had to be rebuilt and were completed in the Spring of 1847. From 1854 to 1861 the entrance to the slides was improved by excavating a channel through the work. Obstructions in the channel at Rocher Capitaine, some 20 miles above the Joachims, were removed in 1844 and 1854.
1848	1848 to 1864 inclusive	31,967 83	1,358 00	811 70	*Works on the Gatineau River.*—In ascending the Ottawa, this is the first tributary having Government works. The Gatineau is the largest tributary of the Ottawa, and falls into it from the north side at a distance of about 2 miles below the City of Ottawa. It is about 400 miles in length, and drains upwards of 9000 square miles of territory. The timber berths on the Gatineau and its tributaries are very extensive, and some of them were worked upon by the first settlers at the beginning of the present century. The timber from this river is taken out principally in the shape of saw logs, and since 1861 the average number has been about 280,000 annually. Square timber of good quality is also manufactured to a limited extent. The timber is diverted from the strong current at the mouth of the river by the guide booms, into a safety pond of about 72 acres in area, and thence it passes through a creek or outlet to the rafting station on the north side of the Ottawa. The old canal leading from the boom on the Gatineau to the safety pond, not having been located properly, a new canal was made from a point further up the stream, in 1864 and 1865, which has effected a great improvement in the driving of the saw logs and promoted the safety of the main guide boom.

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

A Tributary from the South.

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET. Length.	Breadth.	Height.	Draught of water in slides.
WORKS ON THE TRIBUTARIES OF THE OTTAWA.—*Continued.*			Above outlet of the Ottawa, at Ste. Anne.					
THE MADAWASKA RIVER. (*About* 240 *miles long.*)								
AT STATION No. 1. (*At mouth of River.*)								
Retaining boom (1,291 feet of which is made of double timber, 16 x 16)	Mouth of the River Madawaska, on the south side of the River Ottawa.		136		6,265			The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.
Retaining boom piers				19				
Anchor piers				2				
AT STATION No. 2.								
Safety boom above bridge	At the Village of Arnprior.				400			
Wooden bridge over river					182			
Guide booms at head of slide					377			
Dam across river					250			
Crib slide					180	26		
Guard pier on west side, immediately below slide					180			
AT STATION No. 3.								
Flat dam on north side	At Flat Rapids				500			
do south do					300			
AT STATION No. 4.								
Flat dam	At Balmer's Island				116			
AT STATION No. 5.								
Boom	At Burnstown				700			
Piers supporting boom				3				
AT STATION No. 6.								
Dam with water weir for passing timber	At Long Rapids.							
AT STATION No. 7.								
Boom	At Springtown				740			
Piers supporting boom				4				
AT STATION No. 8.								
Double boom	At Calabogie Lake				3,040			
Piers supporting double boom				2				
Boom at foot of lake					600			

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS:

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what Date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
………	1854……	76,727 37	3,409 00	1,251 25	*Works on the Madawaska River :—* This is the second tributary in ascending the Ottawa, where Government has constructed works for the descent of timber. This important tributary flows into the Ottawa from the South, at 136 miles above its mouth at the village of Ste. Anne, which is about 22 miles above Montreal. The Madawaska is about 240 miles in length, and drains a country of about 4,100 square miles in extent: upon this lumbering has been extensively carried on for upwards of a quarter of a century, and a very large quantity of valuable timber has been exported from it. Many of the principal lumbermen have turned their attention lately to the getting out of saw logs, as well as to the manufacture of square timber. The greater part of the Madawaska limits have still an abundant supply of white and red pine. Since 1864, the works have been put in a thorough state of efficiency. The resources of the territory of the Madawaska are so great, that although it has supplied the Quebec and other markets with large quantities of timber of the first quality for nearly 30 years, the products of its limits or berths, appear to be inexhaustible, even at the present time.
………	1852……				
………	1853 …..				
…………	1855……				
………	1861……				
…………	1855……				
………	1859……				
………	1866……				

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET. Length.	Breadth.	Height.	Draught of water in slides.
WORKS ON THE TRIBUTARIES OF THE OTTAWA.—*Continued.*			Above outlet of Ottawa, at Ste. Anne.					
THE MADAWASKA RIVER.—*Continued.*								
A Tributary from the South.								
AT STATION No. 9.								
Main 10-ply guide boom	At High Falls				692			The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide from 2 to 4 feet.
Piers supporting do				4				
Dam across head of falls					300			
Single stick slide with a fall of 60 feet					1,200			
Boom at foot of slide					355			
Pier supporting boom at foot of slide				1				
Dams below foot of long slide				2	140			
Flat dams, at about a quarter of a mile further down stream, at and near Barrett's Chute				6	790			
1 station house				1	30	18		
1 work shop				1	18	12		
AT STATION No. 10.								
Dams on south side at head of falls	At Ragged Chûte				550			
Piers adjoining head of falls				1	150			
Flat dam adjoining pier					77			
Flat dam on north side at head of falls				1	80			
Eddy pier at foot of falls				1	300			
Boom between Ragged Chute and High Falls					1,050			
AT STATION No. 11.								
Flat dam, at rapids	At Boniface Rapids			1	100		10	
do below rapids				1	70		10	
AT STATION No. 12.								
Flat dams	At Duck's Island			2	80		10	
AT STATION No. 13.								
Flat dam on south side	At Baileys Chute				180		10	
do do					70		10	
do north side					150		10	
AT STATION No. 14.								
Boom supported by 3 islands and by piers	At Chain Rapids				3,960			
Piers supporting boom				4				
Single stick slide, at lower end of boom				1	250	6		

DAMS, PIERS, AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		REMARKS.
Commenced.	Completed.		Repairs,	Management.	
		$ cts.	$ cts.	$ cts.	
}	1852........	For expenditure on Madawaska River, see page 143.			The character of the river, throughout a great portion of its length, is a succession of rapids, falls, swift currents and strong eddies. The works on the Madawaska were commenced, prior to the Union, by lumbermen, and continued afterwards by a Joint Stock Company, incorporated by Act of Parliament, under the name of the "*Madawaska River Improvement Company,*" 17th Dec., 1853; their works are located on the upper section of the river; they were found very useful for a considerable period, but they are now in a state of disrepair. In the winter of 1843–4, the Government commenced the slides and booms at the High Falls, and the dams and piers at Ragged Chute, together with other improvements for the passage of timber between this station and the mouth of the river, a distance of about 35 miles. The slide at High Falls was of little use during the first two years, as the bottom of it was placed at too high a level, for the passage of timber; the Ragged Chute works failed and had to be abandoned. In the winter of 1845–6, they were rebuilt; the river was raised 12 feet above its former level, by a dam at High Falls, to increase the flow of water through the single stick slide, in order to overcome this formidable obstruction to the descent of timber. Side-dams were constructed further down stream to flood out dangerous shoals and prevent the jamming of timber in the channel. In 1854, a crib slide and series of booms were brought into use at Arnprior Village, near the mouth of the Madawaska. The timber and saw-logs coming down this stream are floated in single sticks until they reach the large retaining boom at its mouth; here they are collected, formed into cribs, and rafted, and the saw-logs are put into booms for safe driving on the Ottawa, down to their places of destination.
}	1852 and 1857				

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET.			
					Length.	Breadth.	Height.	Draught of water in slides.
WORKS ON THE TRIBUTARIES OF THE OTTAWA.—*Continued.*								The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.
THE MADAWASKA RIVER.—*Continued.*								
AT STATION NO. 15.			Above outlet of the Madawaska.					
A Trib'tary from the S. — Dam (with slide 40 x 10 feet). (Distributed over a reach of 3 miles in extent and situated about 19 miles above mouth of creek.)	....	......	....	1	80	......	19	
Dam (with slide 40 x 10 feet).	....	......	....	1	84	......	10¾	
Dam (with slide 40 x 10 feet).	On Opeongo Creek.	......	106	1	96	......	16½	
Wing dam	....	......	....	1	39	......	5	
do	....	......	....	1	50	......	6	
do	....	......	....	1	78	......	5½	
THE COULONGE RIVER. (160 *miles long.*)								
A Tributary from the North. — Single stick slide......................	High Falls and rapids, on the Coulonge River, a tributary from the north.	...	Above outlet of Ottawa, 184	1	2,956	6	....	
Flat dam at head of chute to opposite side of river		...	Above outlet of Coulonge, 5	1	173	......	....	
Station house		...		1	31	32		
THE BLACK RIVER. (128 *miles long.*)								
A Trib. from the N. — Retain'g boom at mouth of river.	....	......	....	...	....	......	....	
Single stick slide at High Falls, about 1 mile from tho mouth.	....	......	....	1	873	......	....	
Glance pier..........................	High Falls and rapids on the Black River.	......	193	1	346	18	8	
Flat dam..........................		......	....	1	135	......	5	
Single stick boom	....	......	....	...	877	......	....	
do across the river, ½ mile above slide...............	....	......	....	...	262	......	....	

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	*Works on the Opeongo Creek, a Tributary of the Madawaska :—*
1865...	1866.........	Expenditure included in River Madawaska Works, page 143.			This creek falls into the Madawaska at about 106 miles from its outlet. In the winter of 1865-6, this stream was improved by means of three flat dams with slides through them, and by the construction and improvement of side-dams, so as to afford an increased supply of water and thus enable the limit holders and manufacturers of timber in this remote region to send their lumber to market. The improvments embrace a reach of about 3 miles; they are situated between Victoria Lake and the mouth of the creek above which the average distance to the works is about 10 miles. *Works on the River Coulonge :—* This is the third tributary, in ascending the Ottawa that has been improved by Government. This rivers falls into the Ottawa from the north side, at about 184 miles above the junction of the Ottawa with the St. Lawrence, at the Village of Ste. Anne. It is about 160 miles in length, and drains a thickly wooded country having an area of about 1,800 square miles. The Coulonge limits have not been overrun by fire, and are well stocked with valuable white and red pine, so that they will probably supply large quantities of timber for years to come.
1864......	1865.........	23,950 24	1,049 00	370 00	Prior to May, 1865, the descent of timber was greatly obstructed at the High Falls and Rapids, at about 5 miles above the mouth of the river; the running of a raft of timber through this dangerous gorge is now performed with safety, in the course of a few hours, since the completion of the single stick slide, in May, 1865. This slide, at some places, is carried along precipices at a height varying from 50 to 60 feet above the water of the Coulonge; as the rapids are hemmed in by steep rocks towering to great heights above their seething waters, the placing of the foundation of the slide was a work of great difficulty. Certain old works built by private parties, and necessary to the working of the new slide, were purchased by Government, under an award of 20th Feb., 1867, for a sum of $4,342.18. There are other works belonging to private parites above the new slide.
1866......	1866.........	740 36			
					Works on the Black River :— Ascending the Ottawa, this is the fourth tributary upon which Government works have been placed.
1837...	....	12,500 00			This river flows from the north and empties into the Ottawa at a point about 193 miles above Ste. Anne; its length is about 128 miles, and the area drained by it is about 1120 square miles. The slides here were constructed by the late Mr. Poupore, about 30 years ago, and were renewed by him at various times. These works were purchased by Government in 1867, at a price of $12,500, (fixed upon by arbitration) from Mr. Poupore, M.P.P.

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

Shewing the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET.			
					Length.	Breadth.	Height.	Draught of water in slides.
WORKS ON THE TRIBUTARIES OF THE OTTAWA.—*Continued.*			Above outlet of Ottawa, at Ste. Anne.					
THE PETEWAWA RIVER. (*Main Trunk, 138 miles long.*)								
Main Trunk of the Petewawa, a Tributary of the Ottawa from the South.								
AT STATION NO. 1.								
Retaining Boom	At the mouth of the Petewawa.	......	218	......	4,000	......	....	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.
Piers to support boom...............		......	....	6	....	......	....	
AT STATION NO. 2.								
Guide boom, north side of head of slide..............................	....	.....	....	......	248	......	....	
Guide boom, south side of head of slide	At the First Chute of the Petewawa.	......	....	......	541	.....	....	
Dam on north side of slide......		......	....	.....	118	......	....	
do south do	....	......	....	......	359	......	....	
Single stick slide.......	....	......	....	......	563	6	....	
AT STATION NO. 3.								
Guide boom, north side of head of slide	....	......	....	.....	332	......	....	
Guide boom, south side of head of slide..............................	At the Second Chute of the Petewawa.	......	......	.. ..	1,169	......	....	
Dam on north side of slide......		......	......	......	489	......	12	
do south do	....	......	....	......	287	......	10	
Single stick slide	....	......	....	......	554	6	....	
AT STATION NO. 4.								
Guide boom, north side of head of slide..........	....	......	....	......	243	......	....	
Guide boom, south side of head of slide..............................	At the Third Chute of the Petewawa.	......	....	.. ..	586	......	....	
Dam on north side of slide......		......	....	......	97	.....	10	
do south do	....	......	....	......	101	......	10	
Single stick slide	....	......	....	......	1,346	6	....	
AT STATION NO. 5.								
Flat dam....................................	....	......	....	......	116	......	....	
Pier dam, 10 x 10......	At the Bois Dur Station of the Petewawa.	......	....	......	250	.....	....	
Single stick slide		......	....	......	250	6	....	
Guide boom	....	......	....	......	950	.....	....	
North Branch.								
AT STATION NO. 1.								
Flat dam.....	At Half Mile Rapid	......	....	......	160	......	9	
AT STATION NO. 2.								
Flat dam....................................	....	......	....	......	100	......	12	
Single stick slide	At the Crooked Chute.	......	....	......	250	6	....	
Guide boom at head of slide...	....	......	....	......	400	......	....	

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
1857...	1858......	28,859 07	....	....	*Works on the Petewawa River:—* This tributary is the fifth in ascending the Ottawa, upon which Government works, for the descent of timber, have been constructed. It flows from the south into the Ottawa, 218 miles from the outlet of the latter into the St. Lawrence, at the Village of Ste. Anne. It is 138 miles in length, and it drains about 2,200 square miles of country. Rapids, swift currents and chutes, are met with on this river, at short intervals, from its head waters to its mouth. Lumbering operations were carried on for many years on this river by the manufacturers of timber, who at their own expense, constructed such temporary dams and other works, as their limited means would allow. In 1857–8, the Government constructed 4 single-stick slides with the necessary dams and guide-booms at the various chutes along the main stream of the Petewawa, within a distance of 5 miles from the mouth of the river.
......	Works extended in in 1859.	1,045 54			
		$29,904 61			

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

On the North and South Branches of the Petewawa River, a Tributary from the South.

NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET. Length.	Breadth.	Height.	Draught of water in slides.
WORKS ON THE TRIBUTARIES OF THE OTTAWA.—*Continued.*								
THE PETEWAWA RIVER.—*Continued.* *North Branch.*—Continued. Station No.								
3—Single-stick slide	......	......	......	1	480	6	......	The average depth of water in a crib slide, during the running season, is from 18 to 20 inches, and in a single stick slide, from 2 to 4 feet.
Dams	......	......	......	2	200	......	5 to 12	
Booms	Between High Falls and Lake Traverse.	......	......	......	400	......	......	
Flat dams		......	......	5	556	5	5	
do	......	......	......	3	510	......	11	
Glance pier	......	......	......	1	100	......	......	
4—Flat dam	At Thompson's Rapids.	......	......	1	188	......	......	
Chenal dam, north shore	......	......	......	1	26	......	5	
5—Boom	At Sawyer's Bay	......	......	......	2,671	......	......	
6—Flat dam	Meno Rapids	......	......	......	200	......	9	
7— Do	Below Trout Lake	......	......	......	160	......	9	
8—Pier	At Strong Eddy	......	......	......	93	10	8½	
9 do	At Cedar Island	......	......	......	108	10	5	
10 do	At foot of Devil's Chute	......	......	......	40	8	5	
11—Wing pier	At Devil's Chute	......	......	......	90	12	8	
12—Flat dam	At Elbow Rapids	......	......	......	63	......	7	
13—North pier	At foot of Long Sault...	......	......	......	130	10	5	
South do	......	......	......	......	50	10	6	
14—North do	At middle of Long Sault	......	......	......	40	12	8	
South do	......	......	......	......	60	12	8	
15—Angle pier, north	At head of Long Sault.	......	......	......	23	12	12	
do south	......	......	......	......	39	18	12	
16—Flat dam, south shore	On S. shore between Long Sault and Cedar Lake.	......	......	......	87	20	......	
Pier at back of dam		...	......	......	20	10	10	
17—North shore side pier	On N. shore do	......	......	......	184	12	8	
South do	On S. shore do	......	......	......	90	10	8	
18—Cedar Lake dam, total length 407 × 5 high, as follows, viz:								
North shore pier	......	......	......	......	127	8	5	
do dam	......	......	......	......	25	23	......	
Bulkhead piers, N. Channel	......	......	......	3 of 12	=36	14½	12	
do or by-washes	......	......	......	2 of 20	=40	......	......	
South shore dam	At Cedar Lake	......	......	1	34	......	......	
Island pier	......	......	......	1	95	8	5	
South Channel piers	......	......	......	2 of 15	=30	......	......	
By-wash	......	......	......	1	20	......	......	
South Branch.								
1—First Slide	......	......	......	......	174	6	......	
Dam	......	......	......	......	150	......	18	
2—Second slide.	......	......	......	......	432	6	......	
3—Third Slide	......	......	......	......	271	6	......	
Dam	......	......	......	......	.78	......	6	
4—Fourth Slide	On S. branch of the Petewawa.	......	......	......	215	6	......	
Dam		......	......	......	100	......	6	
5—Fifth Slide	......	......	......	......	75	6	......	
Dam	......	......	......	......	60	......	......	
6—Sixth dam	......	......	......	......	82	......	......	
7—Seventh Slide	......	......	......	......	372	6	......	
8—Eighth do	......	......	......	......	513	6	......	

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS ;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what Date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
		29,904 61			
Fall of 1861...	1862.........	13,646 67			
1863...	1864.........	17,582 73	2,874 01	1,100 00	*Works on the Petewawa River :*—Continued. The north branch of the stream was afterwards improved by the Government, and two large reservoir dams were built at Thompson's Rapids and Cedar Lake, for the purpose of retaining the waters of the chain of large lakes in the neighborhood. The peculiar formation of the bed and banks of the river, rendered these works necessary, as it was found that the Petewawa, in its natural state, suddenly rose to flood height in the spring and suddenly subsided afterwards. By means of the regulating dams referred to, the water is retained, and the supply for the raftsmen, on the lower reaches, is so regulated and controlled, as to be furnished when most required. The south branch of the Petewawa has also been improved by the Government. The Government works on the Petewawa were commenced in 1857, and have since been gradually extended; several important works have been constructed since 1863. An excellent quality of white and red pine is obtained from this tributary, but it is only on the upper limits that this description can be obtained in large quantities. Single-stick driving to the boom at the mouth, is the system of driving practised on this river.
....	1860.........	6,500 00			
Total cost of Petewawa Works		$ 67,634 01			

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

NAMES OF WORKS.	In what place situated	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET.			
					Length.	Breadth.	Height.	Draught of water in slides.
WORKS ON THE TRIBUTARIES OF THE OTTAWA.—*Continued.*								
THE RIVER DU MOINE. (*About* 120 *miles long.*)								
A Trib'y from the N.								
Retaining booms	On the River du Moine, for 15 miles from mouth, and at 45 miles from mouth	......	Above outlet of Ottawa at Ste. Anne. 256	2	800	......	....	....
Cascade dams		......		2	186	......	8	....
Flat and side dams		......		5	445	......	8	....
do do		......		5	493	......	10	....
Flat dam, head of slide		......		1	200	......	5	....
Single-stick slide		......		1	300	5	....	....
Piers to support booms		......		2	16	16	16	....
do do		......		2	12	12	12	....
Side piers at slide		......		2	30	10	7	....
WORKS ON THE RIVER TRENT.		Above the mouth of the Trent.						
On the main Trunk of the River Trent.								
AT STATION NO. 1.								
Booms	At Trenton Village, at mouth of Trent, on the Bay of Quinté, north side of Lake Ontario.	....	......	......	....	......	....	....
Piers		....	......	......	....	......	....	....
AT STATION NO. 2.								
Stone dam made of boulders, across part of river at the head of an island	At Widow Harris' Rapids.	116.48	9	1	1,135	10	6	....
				1	130	10	6	....
AT STATION NO. 3.								
Dam of truss-work	At Chisholm's Rapids, below Wilson's Island.	....	... .	1	715	......	6	....
Crib slide		116.48	15½	1	100	50	....	2
AT STATION NO. 4.								
Piers and booms carried away by floods, or removed elsewhere	At Percy Landing.	125.12	28½	.....	....	......	....	....
AT STATION NO. 5.								
Dam	At Myer's Island	....	......	1	167	......	....	....
AT STATION NO. 6.								
Lower crib-slide	At Ranney's Falls	....	......	......	390	33	....	2
Upper crib-slide		174.78	33½	.. ...	1,102	33	....	....
Dam of truss-work		....	......	......	414	33	12	....
Guide booms of three sticks of timber		....	......	......	1,352	3½	....	....

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union. 10th Feb., 1841.	Average yearly cost for last 10 years.		REMARKS.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
Joint	Stock Com	pany........	....	....	This is the sixth and last tributary ascending the Ottawa, with Government improvements. It enters the Ottawa from the north, at about 256 miles from its mouth at Village of Ste. Anne. The River du Moine drains about 1600 square miles of territory, which supplies a considerable quantity of white pine timber. The first slide and booms were constructed in 1851-2, by a joint stock company, incorporated on the 25th January, 1851, under the name of "The Rivière du Moine Boom and Slide Company." In 1862-3 the Government enlarged and improved the works, built dams upon the river, where required, and placed a retaining boom and piers at the mouth of the stream. The system of single-stick driving is the one followed on this river.
1851...	1852.........	....	....	....	
Gover	nment.......	....	....	....	
1862...	1864.........	8,802 00	374 00	345 00	
					Trenton Village, about 67 miles above Kingston:—
....	....	3,121 45	....	....	The timber floated down the Trent and its tributaries is rafted thence, down the St. Lawrence to Quebec, or intermediate ports. From Trenton to widow Harris', the river is a continuous rapid, excepting the first mile.
....	1843...... 1844......	6,588 65	....	....	There is a landing place here where rafts disband previous to running the rapids down to Trenton. The dam at this station renders the river navigable to the foot of Chisholms Rapids, a distance of 6½ miles for boats of 4½ feet draught of water, at low water.
....	1839...... 1843......	Comprised Lock and	in expendi Canal.	ture of	The dam here renders the river navigable for boats of 4½ feet draught of water up to Percy Landing, a distance of 13 miles.
....	1844......	Expenditu No. 1.	re included	in Station	The piers and booms which were constructed here are no longer in use, having been either carried away by floods or removed elsewhere on account of the cost of maintenance. From this station to Ranney's Falls, a distance of 5 miles, the rapids are continuous.
....	1843.........	....	....	....	
....	1845 ..... 1845...... 1844......	47,107 55	....	....	The works here are the most important of all the works upon the Trent, on account of the formidable obstacles to the descent of timber, which have been overcome by their construction. The rapids extend 1¼ miles from this station up to Campbellford.
....	....	....	....	....	

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c., of these Provincial Works, Public Works, and those that have been placed

	NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams Slides & Booms	DIMENSIONS IN FEET.			
						Length.	Breadth.	Heigth.	Draught of water in slides.
	WORKS ON THE RIVER TRENT. —*Continued.*								
On the Main Trunk of the River Trent.	AT STATION NO. 7.								
	Guide booms	At Village of Campbell ford (Seymour.)	....	34¾	.....	1,100	3½	....	....
	AT STATION NO. 8.								
	Wing-dam	....	....	36	.....	300	14	6	....
	Cross-dam	At Fiddler's Island	....	.....	.....	100	14	12	....
	Major Campbell's dam	....	....	.....	.....	....	.....	....	....
	STATION NO. 9.								
	Lower slide for cribs	....	....	.....	1	455	33	....	2
	Upper do do	....	....	.....	1	60	33	....	2
	1st or lower dam of truss work	At Middle Falls, below junction of Crow River	....	.....	1	97	25	av. 13	.....
	2nd dam do		229.33	37½	1	48	20	do 7	.....
	3rd or upper dam do		....	.....	1	38	20	do 7	.....
	Wing dam	....	....	.....	1	637	8	do 5	.....
	AT STATION NO. 10.								
	Single-stick retaining boom	At foot of Crow Bay	....	38	.....	2,600	1 2/12	....	....
	AT STATION NO. 11.								
	Lower slide for cribs	....	....	.....	1	360	33	....	2
	Upper do do	Heely's Falls, above junction of Crow River	....	.....	1	713	33	....	2
	Dam of truss work		275.55	42½	1	488	33	10	.....
	House of wood		....	.....	.....	....	.....	....	.....
	AT STATION NO. 12.								
	Dam of truss work	At Crook's Rapids, Village of Hastings, 6½ miles below foot of Rice Lake	....	.....	1	253	.....	7½	....
	Slide for cribs		352.51	54½	1	79	33½	....	2
	House of stone for lock and slidemaster		....	.....	1	32	24	....	....
On the River Otonabee.	AT STATION NO. 13.								
	Wing dam of truss work above lock	At Whitlaw's Rapids, about 12½ miles above mouth of Otonabee or head of Rice Lake, and 1 mile below town of Peterborough	369.50	93	1	323½	27	av. 12½	....
	Cross dam of truss work above lock		....	.....	1	160	.....	av. 9	....
	AT STATION NO. 14.								
	Piers	At Little Lake, near Town of Peterborough.	....	94	3	....	.....	....	....
	Boom		....	.....	1	....	.....	....	....

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of under local management.—*Continued.*

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
1844......	1844.........	....	....	....	From this station to Fiddler's Island, the rapids continue 1¼ miles further.
1848......	1848.........	883 05			These works were constructed for the purpose of forming a new channel for the descent of rafts. The rapids from this station up to Middle Falls are 1½ miles in length.
1848.....	1848.........		....	....	
....	....	1.583 12	....	....	
....	1845......	20,918 08	....	....	The works at this Station, and at the three preceding Stations were constructed exclusively for the benefit of the lumber trade. The river is a continuous rapid for half a mile, the distance from the foot of the falls up to the foot of Crow Bay.
....	1844......				
....	1845......				
1844...	1844......				
....	1844.. ..				
....	1844......				
....	....	....	....	....	The measurement of rafts is made in Crow Bay, and an account of the same is kept for the collection of the slide dues; whilst the timber is running from Crow Bay to Percy Landing, the slide dues are collected, or bonds are taken for the same. From the foot of the Bay the river is navigable for a distance of three miles upwards, after which it becomes rapid and unnavigable for a further distance of 1½ miles up to Heely's Falls.
....	....	38,985 67	....	....	These works were constructed for the benefit of the lumber trade, and also for rendering the river navigable for boats of four feet draught, at low water, for a distance of 12 miles up to Crooks' Rapids, at Village of Hastings.
1837......	1844......				
....	....				
....	....				
1837......	1838......	Expenditu of Lock,	re included	with that	The dam at this Station has rendered the river navigable, for the same class of boats, for 6½ miles up to the foot of Rice Lake, besides being serviceable to the lumber trade; thence the lake, for 12½ miles, and the Otonabee for 19½ miles, from the head of Rice Lake, are navigable up to Whitlaw's Rapids.
1845......	1845......				
....	....				
1837......	1843......	do	do	do	By means of the dams at this Station the river has been improved and rendered navigable for 1 mile up to Little Lake, and ½ a mile further up to the Town of Peterborough.
....					
1852......	1852......	....	....	....	From this lake up to Buckhorn Rapids, a distance of 31 miles, there are no obstacles to the descent of timber on the Otonabee.
.. ..					

TABULAR STATEMENT OF THE SLIDES,

DESIGNED FOR THE PASSAGE

SHEWING the Situation, Dimensions, Cost, &c,, of these Provincial Works, Public Works, and those that have been placed

	NAMES OF WORKS.	In what place situated.	Height of Falls.	Miles above outlet of River.	No. of Piers, Dams, Slides and Booms.	DIMENSIONS IN FEET.			
						Length.	Breadth.	Height.	Draught of water in slides.
Between Pigeon Lake and the Otonabee.	AT STATION No. 15.								
	Double-stick boom........ ...	....	....	......	.....	300	3½	....	....
	Single do	....	....	......	......	600	1¼	....	....
	Dam of stones......................	At Buckhorn Rapids	549.17	125	1	173	8	av. 6	....
	do truss work..............	....	....	......	1	387	25	av. 5	....
	Crib slide.................	....	....	......	1	65	33	....	2
	Bridge on bents..................	....	....	......	......	600	12	....	....
Between Lake Scugog and Pigeon Lake.	AT STATION No. 16.								
	Dam of truss work..............	At Bobcaygean Rapids, at upper end of Pigeon Lake.	....	......	1	468	25	av. 12	....
	do crib work		555.33	140¾	1	794	15	av. 6	....
	Crib slide		....	......	1	30	33	....	2
On the River Scugog.	AT STATION No. 17.								
	Dam at head of slide............	At Scugog, Town of Lindsay.	562.28	161¼	1	280	30	9	....
	Slide through old lock.........		....	......	1	65	33	....	....

GENERAL

The preceding Statement has been compiled from Appendix N., prepared by J. Stewart and myself, by the Superintendents of the Works, viz. :—D. Boulanger, Superintendent of the Saguenay Works (as per 84,057, 85,261, 84,659, 423.)—H. Merrill, Superintendent of Ottawa Works (as per reports Nos. 84,022, Baillairgé, C.E., general description of Trent Works (as per report No. 943, App. 15, Com. Rep. of 1866-7.)

As no separate account of the cost of construction of each of the works could be obtained in the Depart-

The total expenditure on all the works, up to 1st July, 1867, as appears from the accounts published in

Saguenay, Slides, &c., since time of commencement, 1857...
St. Maurice do do do 1851...... ....
Ottawa do do do 1843.............................. ......
Trent do inclusive of 5 locks, from time of commencement in 1837 to time of the
Union of the Provinces, 10th Feb., 1841..
Trent Slides, &c., since the time of the Union.............................. ....

N.B.—The total expenditure on the Ottawa Slides, &c., includes the following amounts expended for
Total expenditure, Ottawa Slides, &c...
Deduct for expenditure on bridges between Ottawa and Hull, &c.
Deduct for damages.............................. ....

Total expenditure on Ottawa Slides, Booms, &c., exclusive of

OTTAWA, 10th September, 1867.

DAMS, PIERS AND BOOMS OF CANADA,

OF TIMBER TO SEA PORTS;

constructed, in progress of construction, or managed by the Department of
under local management.—*Continued.*

On what date.		Cost of construction since the Union, 10th Feb., 1841.	Average yearly cost for last 10 years.		Remarks.
Commenced.	Completed.		Repairs.	Management.	
		$ cts.	$ cts.	$ cts.	
1856......	1857......	....	....	....	The works constructed at this Station, to facilitate the descent of timber, have been useful to navigation by raising the waters of Buckhorn, Mud and Pigeon Lakes up to Bobcaygean, for boats drawing 4 feet of water. Bridge completed in 1845, and rebuilt in 1857. The dam built in 1835, by private parties, was raised to a higher level by Government in 1837, and completed in 1840.
1865......	1865......				
1837......	1835......				
1837......	1835.. ...				
1857......	1857......				
1844......	1845......				
1837......	1839......	Expenditu of old	re included Lock.	with that	Here also the works are serviceable to the interests of the lumber trade and navigation, the dam having raised the level of Sturgeon Lake for 12½ miles, and the lower portion of the River Scugog for 8 miles from the head of this Lake up to the Town of Lindsay, so as to afford a navigable depth of 4 feet at low water.
1837......	1839......				
1858	1858				
1837......	1844......	Expenditu of Lock.	re included	with that	The wooden lock, constructed at this Station in 1844, was converted into a slide in 1859. The dam at the head of the slide renders the River Scugog navigable for 9 miles up to Lake Scugog, where vessels drawing 4 feet of water may ascend and navigate the Lake up to its upper end, a further distance of 19¾ miles.
1859......	1859......				

REMARKS.

in 1848, and published in the Departmental Report of that year ; also, from the reports furnished, this year,
reports Nos. 84,055, 168.)—H. R. Symmes, Superintendent of the St. Maurice Works (as per reports Nos.
86,043.)—G. W. Ranney, Superintendent of the Trent Works (as per reports Nos. 83,834, 132.)—G. F.
None of these works are under local management, except on the Trent. (See page 128 Appendix.)
ment, I have entered the cost only in cases where it was furnished by the local superintendents.
the Reports of this Department, is as follows, viz. :—

Construction.	Reconstruction.	Repairs & Management.	Total Expenditure.
$ cts.	$ cts.	$ cts.	$ cts.
44,872 79	....	6,411 17	51,283 96
269,043 03	....	126,575 77	395,618 80
762,769 69	54,827 88	245,442 69	1,063,040 26
177,592 00	....	....	177,592 00
459,014 05	....	55,476 82	514,490 87
1,713.291 56	54.827 88	433,906 45	2,202,025 89

damages and bridges, thus :—

....		$1,063,040 26
....	$71,032 55	
....	11,000 00	
		82,032 55
bridges, &c..................		$981,007 71

The Ottawa works were superintended by Gerard Nagle, from 1842 to 1845—by T. C. Keefer, C. E., from 1844 to 1849—and by H. Merrill, since 1848.

G. F. BAILLAIRGÉ, C. E.

APPENDIX No. 18.

(No. 391.)

REPORT BY JOSEPH ROSA, SUPERINTENDENT.

DESCRIPTION OF THE MÉTAPÉDIAC ROAD.

F. Braun, Esquire,
Sec'y., Dept. Public Works, Ottawa.

Ste. Flavie, July 25, 1867.

Sir,—In accordance with the instructions contained in your letter No. 62,933, dated the 15th June last, I have the honor to transmit to you herewith a general and detailed Report upon the works in my charge.

MÉTAPÉDIAC ROAD.

This road begins at the church of Ste. Flavie, in the County of Rimouski, on the south shore of the River St. Lawrence, 201 miles below Quebec, and ends at James Sillar's farm, where the Ristigouche Road begins. The latter connects at Cross Point with the north shore of the Bay of Chaleurs Road, and by the ferry between Cross Point and Campbellton, with the New Brunswick Coast Road on the opposite shore, leading to Halifax.

The Métapédiac Road was constructed to replace the old Kempt Road, which extends from Métis, some miles below Ste Flavie, to Cross Point.

The latter road crosses several chains of mountains, which make it almost impassable. Until the winter of 1865, it constituted the only route of communication with Gaspé. In summer it was travelled with difficulty in carts; and in winter, only on snow-shoes, or with small sleighs to which dogs were harnessed. In this way the mail service for that part of the Province was performed for a period of about thirty years.

By the new road, the distance from Ste. Flavie, on the St. Lawrence, to James Sillar's farm, on the River Ristigouche, is 100½ miles.

At its departure from Ste. Flavie, the Métapédiac Road runs almost at a right angle to the River and Queen's highway.

At 33 miles from Ste. Flavie, after crossing the heights which divide the waters which run respectively towards the St. Lawrence and Bay of Chaleurs, Lake Métapédiac is reached. This is about 9 miles long, with a width varying from 1½ to 2 miles.

The road follows the west shore of the lake, at a greater or less distance from its edge, according to the level of the land, without, however, diverging much from it. It also follows the course of the river of the same name, which is the outlet of the lake, as far as the forty-eighth mile, where it crosses that stream to follow its east shore as far as the point where it falls into the River Ristigouche, thence it follows the latter river to its end.

Thus this road follows the Métapédiac valley throughout its whole length, or from the thirty-third mile, where it begins, to the ninety-sixth mile, on the River Ristigouche, where it ends.

It was begun in 1857, at Ristigouche, under the direction of Mr. Jean Lefebvre, who was superintendent of the southern division until 1862.

In 1859 the northern portion was begun, under the direction of Mr. J. B. Lamontagne, who continued to be superintendent and paymaster upon it until 1862, when Mr. G. F. Baillairgé, C.E., was appointed engineer, and the undersigned, superintendent and paymaster for the whole road.

The Métapédiac Road, extending 71 miles, in the County of Rimouski, crosses the seigniory of Lepage and Thibierge from the River St. Lawrence to the twelfth mile, a portion of the townships of Fleuriau and Cabot, the seigniory of Lake Métapédiac, and the townships of Lepage and Causapscal. The 39 miles in the County of Bonaventure, cross the townships of Assametquagan and Ristigouche.

It is entirely settled upon from the St. Lawrence as far as the fourteenth mile; from that point to the 91½ mile, a distance of 77½ miles, there are twelve habitations, at greater or less distances from each other. From the 91½ mile to its eastern termination it is entirely settled upon; but along this latter part there is an extent of some 9 miles in which the habitations are at a distance from the road.

When this road was commenced, the object which the Government had in view was the construction of an ordinary colonization road for the convenience of the inhabitants of the townships through which it passes, and of those residing at its two extremities, and specifications to that effect were prepared, in the first place by Mr. A. J. Russell, and subsequently by Mr. J. Page, the Chief Engineer of the Department.

But in 1862, after the Trent affair, the Government decided to convert it into a military road, while, at the same time, it should serve as a means of communication between the Provinces of Canada and New Brunswick.

This change of purpose necessitated an alteration in its construction, and a new specification was consequently prepared by G. F. Baillairgé, C.E. The road has since been constructed in accordance with the latter. Along the whole of the road which has been made since 1862 inclusive, the gradients have been reduced as much as possible, to one foot in fourteen at the least, instead of one foot in ten, as was the case on the portion made before that date.

The width of land taken for the road is 66 feet on the lands of the Crown and the townships, and 50 feet in the seigniories; 26 feet in the centre of that width have been cleared of stumps, roots, swamp earth, &c., for the location of the road and the ditches; over the remainder, about 15 or 20 feet on either side, the trees have been merely cut down within 3 feet of the ground.

The general width of the road is 22 feet, the centre rising 18 inches above the edges.

In cedar swamps, marshes, and low and damp places, the bed of the road has been laid with brush. The wood used for the purpose consists of alder, small white birch and maple, branches of spruce and fir, of which none were more than two inches in diameter. The brush-work has been covered with a bed of earth or gravel 18 inches in depth in the centre and 6 inches in depth at the sides.

In those places, a good ditch on each side of the road has been required; whereas, when the land was dry, the road has been made with water tables to drain off the water.

Culverts of cedar or of stone, as well as main ditches or watercourses, have been made for the drainage of the road. The dimensions of these vary according to the quantity of water which they are to carry off. The smallest watercourses or culverts are 2 feet wide, and 20 inches high inside, and the largest are 6 feet wide, and from 2½ to 3 feet high; their length corresponds to the width of the road and to the fall of the land.

Along the whole portion made by Mr. J. B. Lamontagne and the undersigned, there are from 6 to 15 culverts in each mile, according to the nature of the soil.

In the cuttings which it has been necessary to make to lessen the declivities of the hills or to cut through hillocks, the slope of the sides is 1½ feet in one; and of the sides of the ditches, 1 foot in one.

In the most difficult parts on which work has been done since 1862, such as the foot of the mountains, the road at its least width has 16 feet of roadway, or 18 feet over all. The outer edge of the road in these places has been raised 18 inches above the inner edge. All the side-wharfing constructed at the foot of mountains to widen the road and to preserve its level as much as possible, and also all elevated and dangerous embankments, have been provided with posts or guard-railings.

The large bridges have been built with sufficient solidity to bear the passage of artillery, if it should be necessary to convey it from Halifax to Quebec or elsewhere after the close of the navigation.

At the commencement of the works, in 1857, to make matters more easy for farmers and others who might be desirous of taking contracts therein, the system of dividing the work into lots or sections of seven arpents was adopted.

After notice had been given in the parishes and adjacent townships, these lots were put up at public auction and adjudged to the lowest bidder, provided that he was in a position to furnish two solvent sureties to insure the due execution of the contract.

In 1862 and 1863, the undersigned continued to give out the lots in the same manner as formerly; but in 1864, by order of the then Commissioner, the method of giving out the contracts was altered: instead of the lots being given out by auction, they were given out by tender.

The systems of payment have been as follows: in the southern division, under the superintendence of Jean Lefebvre, the contractor received one-third of the contract price when half the work was done; half the amount when two-thirds of the work were done; and the balance when the whole was completed and received.

In the northern division, under the superintendence of J. B. Lamontagne, the contractor had to complete his work before being paid. There was but one payment a year,—in the autumn.

Under the superintendence of the undersigned, since July, 1862, the payments have been made every month. Thus the contractors were paid in proportion to the progress of their work; but fifteen per cent. was retained upon the amount of each monthly progress certificate, the amount so retained not being payable until the final certificate was granted, after the completion of the work.

From the commencement of the road, in 1857, until last year, inclusive, it has every year occurred that a certain number of contractors have failed in the execution of their contracts, and this has been the cause of considerable delay in the completion of the road.

In every case (at least since 1862) in which sections have been abandoned, the contractors as well as their sureties have been notified, and a large number have even been served with legal protests, that if they did not complete the work which they had undertaken, or for the completion of which they had become sureties, as the case might be, the work would be terminated and completed at their cost and expense, and they would be held responsible for the amount which might be expended over and above the amount of their respective contracts.

In 1864, the contracts entered into for the completion of the road bound the contractors to finish their work on or before 1st July, 1865; but, in consideration of the lateness of the season when the contracts were signed (the month of October, 1864), the Department granted them time until the month of September of the same year; but even then they were unable to conclude their work, in consequence of the rainy autumn and early winter.

Since 1862 inclusive, the making of the ordinary bridges has been included in the contracts for the lots as a part thereof: they have been constructed of round cedar. The roadway, which is generally 18 feet in width, is also of round cedar, covered with earth. These rest on four stringers or sleepers, which are supported by abutments, or by abutments and piers, according to the length of the bridges: these also are of round cedar. All the bridges are furnished with guard-railings, or balustrades, for the safety of travellers.

Mile-posts of cedar, 6 inches square and 5½ feet long—2½ of which are below and 3 above ground—with the distances from Ste. Flavie to Cross Point marked on the one side, and from Cross Point to Ste. Flavie on the other, have been placed along the road between the two points above mentioned.

With the exception of three sections which are not completed, and of the part made between the years 1857 and 1862, which requires a great deal of repair, the road is now in very good condition.

At the commencement of the road at Ste. Flavie, at its terminus at Cross Point, and at the 55¼th mile, which is half way between the two places above mentioned, signs have been set up. These signs consist of one wide board, 22 feet long, placed 20 feet above the road and supported by two cedar posts 10 inches square and 25 feet long, 5 feet of which are below the ground.

These signs bear inscriptions in French on the north side and in English on the south side.

The Ste. Flavie sign bears the following inscription :—

"METAPEDIAC ROAD."

"From Ste. Flavie to Cross Point..........................110 miles."

Commenced in 1859. *Finished in* 1867."

"Ste. Flavie to Quebec....................................200 " "
" do Halifax. . ...500 " "

The sign at the 55th mile bears the following inscription :—

"METAPEDIAC ROAD."

"*Half way between Ste. Flavie and Cross Point.*"

The Cross Point sign bears the following inscription :—

"METAPEDIAC ROAD."

"Cross Point to Ste. Flavie.................................110 miles."

"*Commenced in* 1859. *Finished in* 1867."

"Cross Point to Quebec.....................................310 " "
" do Halifax..390 " "

The Métapédiac Road is divided into three parts, namely, the Northern Division, the Central Division, and the Southern Division.

NORTHERN DIVISION.

This division commences at Ste. Flavie, on the St. Lawrence, and terminates at the St. Pierre River, at the head of Lake Métapédiac, opposite the residence of Pierre Brochu, 33 miles from the starting point.

The line of this division was traced in the winter of 1857–8, by G. F. Baillairgé, C.E., of the Public Works Department. As it was traced, it was as level as any line could be made across the height of land in this part of the Province; but, unfortunately, between the 14th to the 23rd mile, in many places, the line has been deviated from, and the road made to traverse hills which the tracing avoided, and thus the hills on the road are much more numerous and steep than they would have been had the line been followed throughout. These changes were made in order to avoid the moist and spongy land at the foot of the hills, and to have drier ground, or to avoid making side cuttings on the slopes of the hills, so as to reduce the cost of construction.

In this division, and chiefly from the St. Lawrence to the 24th mile, on almost all elevations and hills, you strike the rock or hard-pan at a depth of 1 or 2 feet beneath the surface of the soil.

From the St. Lawrence to the 23rd mile, the gradients of the road are generally 1 foot in 10. From the 23rd to the 33rd mile, they are 1 foot in 14, or less.

Work was commenced on this division in 1859, under the direction of J. B. Lamontagne, Esq., merchant, of Ste. Flavie. In the three years from 1859 to 1861, inclusively, during which that gentleman was superintendent and pay-master for this division, 14 miles of road were made, namely, from the 9¼ mile to the 23¼.

Of these 14 miles, 3, namely, from 9¼ to 12¼, were made 16 feet in width, in accordance with the specification signed by A. J. Russell, Esquire. The other 11 miles were made 22 feet wide, in accordance with a specification signed by J. Page, Esq., Head Engineer of the Department, and the remainder in accordance with a new specification furnished by Mr. Baillairgé.

The small bridges constructed on the 14 miles aforesaid, to the number of eleven, were built under separate contracts, and apart from the lots.

The abutments of these bridges were built of cedar, squared on three faces and dovetailed together at the angles. The roadway, which is from 16 to 18 feet in width, is made of cedars faced on four sides, and furnished with guard-rails.

The remainder of the division, or from the St. Lawrence to the 9¼th mile, and from the 23¼th to the 33rd mile, in all 19 miles, was made under the direction of the undersigned, appointed superintendent and pay-master for the whole road on the 12th July, 1862.

In 1862 and 1863, the 9¼ miles from the St. Lawrence to the point where the works executed by J. B. Lamontagne, Esq., begin, and 3½ miles round the base of Brochu's Mountain, at the upper extremity of said division, in all 15½ miles were constructed. Of these 15½ miles, 3¾ miles, from the St. Lawrence upwards, were made by the day, by order of the Hon. Commissioner of Public Works.

In the winter of 1863–64, the undersigned, after having secured the authorization of the Department, changed the line between the 23¼th mile and the 29½, a section 6¼ miles in length, which had not as yet been begun, in order to avoid a bridge across the River Blanche, and to shorten the road.

The bridge on the River Métis, which is 6½ miles from the River St. Lawrence, was constructed in 1862 and '63, under the direction of the undersigned. It is built in accordance with a plan made and signed by G. F. Baillairgé, C.E.

This bridge is 271 feet in length, 23 feet high, and 18 feet wide. The abutments and piers are cribs built of cedar logs, counterhewed on three sides, not less than 10 inches square at the small end, and dovetailed together at the angles.

There are three spans, of 50 feet in width each. The two piers, one of which stands in 11 feet of water, have been provided with ice-breakers at the upper sides.

Each span is traversed by six stringers, laid horizontally and at equal distances : the latter are covered with birch bark, to protect them against rain. The flooring is of cedar timbers 6 inches thick, laid cross wise, and is furnished with a guard railing: the width is 16 feet.

The outer stringers of the three spans are strengthened by trusses, of which the braces and posts are bound to the timbers beneath by means of bands of wrought iron. The heads of the posts are covered with zinc, to prevent the water from penetrating and causing the wood to rot.

The whole of the timber of the superstructure which is of white or yellow pine, except the flooring of the roadway, received three coats of fire-proof paint.

In 1866, a portion of the paint having been washed off by the action of the rain, a coat of Stockholm tar was laid on and covered with sand.

The Northern division of the road was made on cleared or cultivated lands for a distance of 8½ miles, 4 from the village of Ste Flavie to the 5th mile; 4 from the 6th to the 10th mile, and ½ mile from the 32½ mile to the 33rd, near the residence of Pierre Brochu, at the head of Lake Métapédiac. For the remainder of the distance it was made through the bush, and it was finished only on the 5th instant.

CENTRAL DIVISION.

This division commences at the River St. Pierre, at the head of Lake Métapédiac, 33 miles from the St. Lawrence, and ends at the River Causapscal, at the 61st mile, at the residence of Jonathan Noble, senior, a distance of 28 miles. It is built in accordance with the new specification.

The line of this division was traced by the undersigned, assisted by Alexander Fraser, Esq., of Métapédiac, in the winter of 1863-64.

The ground is generally undulating. In making the road the hillocks have been cut down and hollows filled, so that at present the steepest gradients are one foot in fifteen or eighteen, and even less in many cases. There is an exception as regards one hill near Noble's, the gradient of which is one foot in twelve.

Work was commenced in October, 1864, and finished on the 5th of July of the present year, except on Lots Nos. 11, 38, and 70, which cannot be finished without a fresh appropriation. These three lots are only passable.

The width of the road is 22 feet, except 3 lots, on a portion of which it is only 18 In order to secure the same width here as elsewhere, it would have been necessary to in crease, by six feet, cuttings which are already very considerable, and this was deemed too expensive.

In this division, 24½ miles of road-way were made through the bush, 3 miles on burnt land, and ½ mile on cultivated land.

The bridge on the River St. Pierre, constructed from a plan made by the undersigned, is 184 feet in length, 11 in height, and 18 in width: it rests on abutments and bents. The spans between the abutments and bents are four in number, and 30 feet long. These spans are spanned by six stringers of white Pine, laid at equal distances. The stringers were covered with birch-bark before the laying of the flooring, which is of cedar, six inches thick, and counterhewed. A piece of pine, 10 by 12 inches, laid on blocks one foot in height, on each side of the roadway, constitutes the guard-rail. This beam is bolted to the blocks and outside stringers by means of iron bolts one inch in diameter. The roadway is 16 feet in width.

The bridge over the Métapédiac river on the 48th mile from Ste. Flavie, was built in 1865-66 in accordance with a plan prepared by G. F. Baillairgé, C.E. It is 200 feet in length, 15 feet high, and 18 wide. It has 4 spans, the principal one being 67½ feet in length.

The outer stringers of the great span are supported by trusses, the posts of the latter being bound to the cross-pieces and braces by means of wrought iron plates, and to bearers and blocks beneath by means of rods, also of wrought iron.

The abutments, piers, and flooring are of white cedar. The spans are crossed by six stringers in the same way as the bridge on the river Métis, on the northern division, as described above.

The bridge on the river Causapscal, 61 miles from Ste Flavie, was also constructed in 1865-66, in accordance with a plan prepared by G. F. Baillairgé, C.E. It is 264 feet long, 15 feet high, and 18 wide. This bridge was built on abutments, bents and piers. It has 6 spans, namely: 1 of 15 feet, 2 of 30, and 3 of 46. The outside stringers of the three great spans are supported by trusses, the posts of which are bound to the bearers beneath by means of iron plates; in short, this bridge is made in the same manner and of the same materials as those over the rivers Métapédiac and Métis, already described.

The whole of the superstructure of the St. Pierre, Métapédiac, and Causapscal bridges received three coats of fire-proof paint.

All the other bridges are built of round cedar logs, and covered with earth or gravel.

SOUTHERN DIVISION.

This division commences at the river Causapscal, 61 miles from the St. Lawrence, and ends at the 100½ mile at the west line of the farm of James Sillars, on the north bank of the river Ristigouche. It is 39½ miles long.

The line of this division was traced in 1857 by Mr. Jean Lefebvre. The western portion of this line, and chiefly from the 61st to the 72nd mile, was improved by the undersigned in 1862 and 1863. A portion of this division was made from a specification prepared by Mr. Lefebvre, and the remainder from the new specification.

Throughout the whole of this division the river Métapédiac flows in a very narrow bed, bordered on either side by very high mountains, which in some places descend to the river bed.

The bank of this river is intersected in various places by ravines, over which it has been necessary to construct bridges, some of which are of considerable length.

The works upon this division were commenced in 1857, under Mr. Jean Lefebvre, as Superintendent, and Mr. Joseph Meagher of Carleton, as paymaster, and were continued until 1862, at which time the undersigned was appointed Superintendent and Paymaster for the whole road.

During the period of five years, between 1857 and 1861, inclusive, Mr. Lefebvre carried on operations on 13¾ miles of the eastern section of the road, or from the 101½ mile, extending back to the 86¾ mile,

When the undersigned assumed the direction of the whole road in 1862, within the 13¾ miles above mentioned, there was one lot, 8¼ arpents in length within which there was a bridge 150 feet long and 22 feet high—the bridge at Clark's Brook 277 feet long and

19 feet high, and that at "No-man's Gulch," 180 feet long and 40 feet high, which were only half completed, and within the same limits there was to be a bridge over the ravine of the Three Islands, 150 feet long and 40 feet high, the erection of which had not been begun.

The greater part of the road over these 13¾ miles is only 14 or 15 feet wide, and in many places in which the rock is exposed, the width is only 9 or 10 feet. This part of the road has been constructed according to a specification prepared by Mr. Lefebvre.

The greater portion of the road over these 13¾ miles has been constructed on cribs, the majority of which are gradually giving way, the timber work having been badly executed, and the foundations having been laid without the precautions necessary to prevent their giving way or being undermined by the action of the current during the spring floods.

After the appointment of the undersigned, in 1862, the 25¾ miles which had not been made in that division were divided into lots or sections of about 7 arpents each, and the work given out by contract, to the lowest bidders.

For a distance of about 30 miles in this division the road has been constructed principally on cribs of cedar logs, varying in height from 4 to 15 feet.

Sixteen miles from the river Causapscal a very high mountain is reached, generally known as the "Rocher de Louis Lachance." Its lower part, which is of rock and almost perpendicular, descends to the bed of the river.

To secure the solidity of the road at this place a portion of the crib-work has been constructed of cedar squared on three faces and laid to close joints with cross ties dovetailed between. The three first lower layers of the face timbers and the under ends of the cross ties have been bolted to the rock below by means of iron fox-wedged bolts, one inch in diameter.

In the month of March, 1863, the charge of this division was again assigned to Mr. Jean Lefebvre. He retained this appointment until the month of August following, at which time the undersigned assumed entire charge of the road.

All the elevated portions of the road constructed by the undersigned since 1862, which would have been dangerous for the mails and passengers passing at night, have been provided with posts or guard rails. The works upon this division were completed in 1866.

Since 1862, five fires have caused very serious damages on this division, the first in 1863, the second, third and fourth in June, 1864, and the fifth in June last.

These fires originated as follow :—The first,—That of 1863, was due to the carelessness of a foreman, who allowed the contractors to make fires in the clearings on the sides of the road, during a long drought.

The second to the malice or negligence of some travellers, who made a fire in an old camp, and did not extinguish it before leaving.

The third was only a sequel to the second, the fire having extended its ravages over an extent of several miles, crossed to the opposite side of the river, and penetrated by a gully to the rear of the mountains ; eight days later, the wind having changed, it returned by another gully, and again crossed the river.

The fourth and fifth owe their origin to fires kindled by the settlers to burn their clearings.

The annual floods in the River Métapédiac, and the torrents from the mountains, caused by the melting of the snow, have also been and will be, in the spring, the cause every year, of damages in this division which will require repair for three or four years.

There are a great number of bridges in this division ranging from 50 to 420 feet in length, and from 18 to 40 feet in height. All these bridges are built of cedar logs and covered with earth or gravel, excepting the bridge over the River Assametquagan, which is 115 feet in length, and the roadway of which is twenty-three feet above the water.

This bridge was built in 1862-3 from a plan prepared by G. F. Baillairgè, Esq. The two abutments and the centre pier are built upon and bolted to the rock. It has two openings or passages for the water, one 60 feet in width and the other 37½ feet. It is constructed in the same manner and of the same materials as the bridges over the Causapscal and Métapédiac, above described.

For a more detailed description of the work performed on this road, between 1857 and 1867, inclusive, see the annexed table. (*Not published.*)

RISTIGOUCHE ROAD.

This road begins at the farm of James Sillars, where the Mètapédiac Road terminates at 100½ miles from the River St. Lawrence, and skirts the River Ristigouche as far as the ferry at Pointe à la Croix, where it terminates; its entire length is 10 miles.

Properly speaking, this road is only a continuation of the Métapédiac Road, because it connects that road with the road on the North Shore of the "Baie des Chaleurs" leading to Gaspé; and by means of the ferry between Pointe à la Croix and Campbellton with the Nova Scotia Road to Halifax on the opposite side of the river.

This road was constructed in 1843, under the superintendence of A. J. Russell, Esq.

In 1865 the undersigned received instructions to have the road repaired, but it was only possible to begin the work in 1866. The works necessary to the repair of the road, consist of the reconstruction of three small bridges of from 25 to 30 feet in length, and the erection of a new bridge 143 feet long, 27 feet high, and 18 feet wide, over Hugh Fraser's mill stream. It has two spans, the largest of which is above the water, and is 59 feet in width; the other is 19 feet in width; they each contain five stringers, supported on two abutments and a pier composed of cedar logs. The outside stringers of the principal span are strengthened by trusses, the posts of which are attached to the bearers beneath by iron bands.

The corbels, stringers, and the whole of the wooden superstructure are of squared pine. The roadway is covered with white cedar, placed transversely, and is provided with a railing on each side. The stringers were covered with birch bark before the roadway was laid.

Another bridge across the bay, formed at its mouth by the Petite Rivière is now in course of construction. It will be made of cedar logs, and the roadway will be covered with earth or gravel, excepting over the openings, where it will be laid with white cedar squared. The span over the western branch will be 70 feet in width; and that over the eastern branch, 45 feet. This bridge will be 1,853 feet in length, from 6 to 19 feet in height, and 18 feet in breadth. A railing will be placed on each side of the roadway.

Over the principal opening the outside stringers will be strengthened by rafters or braces fastened to the bearers underneath by iron bars. This bridge will be completed in the course of September next.

In its present condition this road may be used for ordinary vehicles, although in some places it is very narrow. If, however, it becomes necessary that troops should march by this road, considerable difficulty would be experienced in many places at which the road is only 9 or 10 feet in width, and in which the snow accumulates to a great depth in winter.

It is covered by water in several places during the spring, to the extent of altogether from 2 to 3 miles, and these places, as well as several other portions of the road are in need of repair.

I have the honor to be, Sir,
Your obedient servant,

JOSEPH ROSA,
Superintendent.

APPENDIX No. 19.

TABULAR STATEMENT OF ROADS IN CANADA.

Made, improved, or in progress of Construction under the Department of Public Works, with the Expenditure thereon, embracing the Main Provincial Highway from Gaspé Basin, on the South side of the Gulf of St. Lawrence, and from Portneuf, 181 miles below Quebec, on the North Shore of the River St. Lawrence, Canada East, to Sandwich, on the River St. Clair, and Port Sarnia, at the foot of Lake Huron, Canada West.

NAME OF ROAD.	MILES IN		MILES IN		KIND OF ROAD.			Total length of Road.	NUMBER OF		YEAR		Cost of construction since the Union.
	Town-ship.	Sei-gniory.	Main Pro-vincial Road.	Branch or Col-lateral Road.	Common or Gravel.	Maca-damized.	Planked.		Bridges.	Toll-gates.	Com-menced.	Com-pleted.	
ROADS BELOW QUEBEC.					Miles.	Miles.	Miles.	Miles.	No.	No.			$ cts.
Coast Road on North side of Baie des Chaleurs, Eastward down the Bay.													
Grand Nouvelle, from end of Kempt Road to Nouvelle Harbor	19¼	10	29¼	......	29¼	......	......	29¼	16	......	......	1844......	96,751 83
Grand Nouvelle to Port Daniel, 9 miles westward from line County of Gaspé..	67	......	67	......	67	......	......	67		......	......	1844......	
Port Daniel to Grande Rivière..........	16¾	12¼	29	......	29	......	......	29	5	......	......	1844......	
Grande Rivière to Percé..........	13½	4	17½	......	17½	......	......	17½	3	......	......	1846......	
Percé to Gaspé Basin	31¼	......	31¼	......	31¼	......	......	31¼	......	......	......	1847......	
Offset from coast road at La Belle Anse, 11½ miles from Percé to Point St. Peter..	2¾	......	......	2¾	2¾	......	......	2¾	......	......	......	1847......	
GASPÉ AND ST. LAWRENCE.													
From end of road on north side of Gaspé Basin, around Arnold's Bluff up the north-west arm of Gaspé Bay on its south side to l'Anse aux Cousins......	2⅛	......	2⅛	......	2⅛	......	......	2⅛	......	......	1864......	1865......	1,995 00
From l'Anse aux Cousins up north-west arm of Gaspé Bay, on its south side, to Pointe aux Navets or to the proposed scow ferry, 3⅛ miles not made..........	3⅛	......	3⅛	......	3⅛	......	......	3⅛	......	......	1864......	1¾ miles, unfin'hed	
From the opposite side of the proposed scow ferry down the north-west arm of Gaspé Bay, along its north side, to the Peninsula, 6¾ miles not made	6¾	......	6¾	......	6¾	......	......	6¾	......	......	......	unfin'hed	......

From Peninsula, eastward, along north side of Gaspé Bay to Grand Grève, at extreme easterly end of the Gaspé District	10	....	10	....	10	....	....	10	1	....	1859......	1860......	A 16,295 68 Includes cost of B & C.
Portage Road, from Peninsula or north side of Gaspé Bay northward, to Anse aux Griffons, on South Shore Road of St. Lawrence	7½	....	....	7½	7½	....	....	7½	....	....	1859......	1860	B For cost see A.
SOUTH SHORE GULF ROAD.													
(*From Cape Rosier westward up the St. Lawrence.*)													
*From Cape Rosier Light House to Anse aux Griffons	7½	....	7½	....	7½	....	....	7½	....	....	....	1866......	*3,260 14 C
Anse aux Griffons westward to Great Fox River	6⅛	....	6⅛	....	6⅛	....	....	6⅛	....	....	1861.....	1862......	For cost see A.
Great Fox River to River Magdalen	50 78/100	....	50 78/100	....	....	....	....	50 78/100	....	....	not commence.	....	....
River Magdalen to Ruisseau Castor	59 34/100	....	59 34/100	....	....	....	....	59 34/100	....	....	do	....	....
Ruisseau Castor to seigniory line between Latourelle and Seigniory of Ste. Anne des Monts	4 88/100	....	4 88/100	....	3¼	....	....	4 88/100	....	....	1864......	1864......	2,000 00
Latourelle to Cap de Chatte	....	13 20/100	13 20/100	....	13 20/100	....	....	13 20/100	Road co	nstructe	d by the	settlers	....
Cap de Chatte to Lot 9, Township of St. Denis	36 63/100	....	36 63/100	....	36 63/100	....	....	36 63/100	2	....	1857......	1866...	29,251 96
Lot 9, Township of St. Denis, to Matane	10	....	10	....	10	....	....	10	....	....	1857	1859..	
Matane to Métis	23	....	23	....	23	....	....	23	....	....	1848	1852......	8,147 85
KEMPT OR OLD MILITARY ROAD.													
From Métis, on the St. Lawrence, to Officer's Brook, on the Ristigouche, or the intersection of the Coast Road, on the north side, and at the head of Baie des Chaleurs	97¾	....	97¾	....	97¾	....	....	97¾	6	....	1830......	1832......	$29,064 00 up to 1833.
METAPEDIAC OR NEW MILITARY ROAD.													
From Ste. Flavie, 5 miles above Métis, on the south shore of the St. Lawrence, to Cross Point Ferry, where it connects with the Coast Road, along the north side of the Baie des Chaleurs, and the New Brunswick Coast Road, on the opposite side of the Bay, leading to Halifax	98½	12	....	110½	110½	....	....	110½	51	....	1857 on south end. 1859 on north end.	1867...	$187,870 85 including 2,922 76 for Ristigouche R.

Carried forward.................. $377,560 07

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* Made by the Bureau of Agriculture.

APPENDIX No. 19.—*Continueed.*

TABULAR STATEMENT OF ROADS IN CANADA,

Made, improved, or in progress of Construction, under the Department of Public Works, &c.—*Continued.*

NAME OF ROAD.	MILES IN		MILES OF		KIND OF ROAD.			Total length of Road.	NUMBER OF		YEAR.		Cost of construction since the Union.
	Township.	Seigniory.	Main Provincial Road.	Branch or Collateral Road.	Common or Gravel.	Macadamised.	Planked.		Bridges.	Toll-gates.	Commenced.	Completed.	
					Miles.	Miles.	Miles.	Miles.	No.	No.			$ cts.
TEMISCOUATA ROAD.											*Brought*	*forward.*	377,560 07
From Rivière du Loup, on the St. Lawrence to the Provincial Line between Canada and New Brunswick	28.60	38.40	....	67	67	....	....	67	14	....	....	1867......	204,376 01
NORTH SHORE GULF ROAD, *Going Westward.*													
Portneuf to Escoumains	18	12	....	30	3½	....	....	30	....	....	1864......	Unfin'ed	1,360 92
Escoumains to Tadousac, at the mouth of the River Saguenay	28	....	....	28	16	....	....	28	1	....	1856	do	7,208 56
Ste. Catherine, on the opposite or west side of the River Sagueuay, to Rivière Noire, below Ste. Fidèle, in the Seigniory of Mount Murray, where it connects with main road leading to Quebec	....	19	....	19	9½	....	....	19	....	....	1855......	do	
Chemin des Caps, from Baie St. Paul to St. Joachim	....	29½	29½	....	29½	....	....	29½	....	....	....	....	....
MALBAIE AND GRANDE BAIE ROAD.													
* From Lake Nairn, near Malbaie, to Village of Bagot, Grande Baie, River Saguenay	61	2	....	63	63	....	....	63	1	....	1856......	Unfin'ed	15,956 73
CARTIER ROAD.													
From Village of Malbaie to its intersection with the Malbaie and Grande Baie Road	27¾	9	....	36¾	36¾	....	....	36¾	....	....	1864......	do	800 00

TRIBUTARY ROADS BETWEEN QUEBEC AND MONTREAL.													
(Between the South Shore of the St. Lawrence and the United States.)													
†Kennebec, running through the Seigniories of Lauzon, Joliette, Ste. Marie de la Beauce, St. Joseph, Rigaud de Vaudreuil, Aubert de L'Ile, and the Township of Linière......................	24½	66	....	90½	90½	....	....	90½	....	....	....	1851.....	13,022 13
Gosford, from Chaudière Bridge to Sherbrooke, 121 miles long. New portion runs through the Seigniories of St. Giles and Ste. Croix, and the Townships of Nelson, Inverness, Halifax, Ireland, Wolfstown, Ham, Weedon, or from Beaurivage River to Dudswell line.....	53⅙	9⅓	....	62½	62½	....	....	62½	....	....	....	1843...	Up to 1849. 43,666 60
‡ Arthabaska, as under:— Gentilly to St. Louis........14½ miles. St. Louis to St. Norbert.....14 do Inverness Church, on Gosford Road, to Kingsey Terminus, by St. Norbert 49$\frac{1}{5}$	72$\frac{2}{10}$	5½	....	77$\frac{7}{10}$	77$\frac{7}{10}$	....	....	77$\frac{7}{10}$	1	....	....	1848......	62,175 35
Main Eastern Townships and Branches, as under:—													
Main—Chambly to St. Césaire..............	... .	15	....	15	....	5¾	9¼	15	....	....	....	1848......	89,045 27
St. Césaire to Granby...........	5	10⅙	....	15⅙	....	11½	3⅔	15⅙	....	....	....	1850......	
Granby to the Outlet....................	32¼	....	....	32¼	32¼	....	....	32¼	....	....	....	1850......	44,709 45
Outlet to the Province Line at Hereford	38½	....	....	38½	38½	....	....	38½	1	....	....	1850.....	
Carried forward................	....	....	....	....	....	....	....	....	....	....	....	....	$859,881 09

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* The original appropriation was $6,000, for a road from St. Urbain to Grande Baie. Of this, $2,700 was expended on surveys under the Crown Lands Department, and the balance of $3,300 given over to the Department of Public Works. Under that Department an examination of the country was made in 1847, and in the end of 1848 the inhabitants of Malbaie and Mr. Price, of Quebec, opened a winter track along the surveyed route, between Malbaie and Grande Baie or Baie des Ha! Ha! at their own expense, which is easily travelled. The appropriation was for a winter road for sleighs, and a summer one for horses, cattle, &c.

† This road extends from Point Levis to the boundary between the Province of Canada and the State of Maine, running chiefly along the Rivers Etchemin, Chaudière and Du Loup.

The expenditure was on that portion of 24½ miles which is in the Township of Linière. The total expenditure on this road, prior to and since the Union, is $82,884.35, per Pub. Wks. Rep., 1850.

‡ This road commences at the main road, along the south shore of the River St. Lawrence, in the Seigniory of Gentilly, from whence it runs through the Townships of Blandford and Standfold to the Church of St. Eusèbe. From thence it turns Eastward, and passing through the Townships of Somerset and Inverness, terminates at the Gosford Road near the Church of Inverness. It also runs Westward from the Church of St. Eusèbe, through the Townships of Arthabaska and Warwick, terminating in Kingsey at the road which leads to Melbourne.

APPENDIX No. 19.—*Continued.*

TABULAR STATEMENT of Roads in Canada, made, improved, or in progress of construction, under the Department of Public Works.

NAME OF ROAD.	MILES IN		MILES OF		KIND OF ROAD.			Total length of Road.	NUMBER OF		YEAR		Cost of construction since the Union.
	Township.	Seigniory.	Main Provincial Road.	Branch or Collateral Road.	Common or Gravel Road	Macadamized.	Planked.		Bridges.	Toll-gates.	Commenced.	Completed.	
TRIBUTARY ROADS BETWEEN QUEBEC AND MONTREAL.—*Continued.*					Miles.	Miles.	Miles.	Miles.					$ cts.
Brought forward													859,881 09
(*Between the South Shore of the St. Lawrence and the United States.*)													
Branch—Granby to Sherbrooke or Sherbrooke to Waterloo	45			45	45			45	{ Expenditure only on 7 miles. }			1848	1,920 00
St. John's to Spier's Corners, by St. Athanase		$14\frac{2}{3}$		$14\frac{2}{3}$		$4\frac{2}{3}$	10	$14\frac{2}{3}$		2		1848	38,268 23
Spiers' Corners to Stanstead, by Brome's Corner	56	4		60	60			60				1853	16,641 47
Sutton Mountain Road	$4\frac{1}{2}$			$4\frac{1}{2}$	$4\frac{1}{2}$			$4\frac{1}{2}$				1847	3,575 20
Potton Mountain Road	8			8	8			8				1848	3,334 93
*Caughnawaga Roads		$6\frac{16}{100}$	$2\frac{81}{100}$	$3\frac{35}{100}$		$6\frac{16}{100}$		$6\frac{16}{100}$			1863	1866	3,527 07
Main Roads between Montreal and the Boundary Line between Eastern and Western Canada.													
Ste. Anne, across Ile Perrot to Cascades		$7\frac{3}{4}$	$7\frac{3}{4}$		$7\frac{3}{4}$			$7\frac{3}{4}$					} 81,288 42
Cascades to Côteau du Lac		$14\frac{1}{2}$	$14\frac{1}{2}$				$14\frac{1}{2}$	$14\frac{1}{2}$		2		1844	
Côteau du Lac to Province Line, or St. Zotique Road		8	8		8			8			1859	1860	1,482 01
OTTAWA RIVER—NORTH SIDE.													
Chats Portage—From Portage du Fort to the Calumet	$7\frac{71}{100}$			$7\frac{71}{100}$		$7\frac{71}{100}$		$7\frac{71}{100}$			1858	1859	23,302 56
													1,033,220 98
WESTERN CANADA.													
ROADS ALONG THE OTTAWA—SOUTH SIDE.													
Ottawa to Pembroke	85			85				85	2	{ Expenditure only on part of road. }		} 1852	5,173 82
Ottawa to L'Orignal	46			46	46			46	1			1852	23,756 00

ROADS CONNECTING THE ST. LAWRENCE WITH THE OTTAWA.													
Military, from Lancaster on Lake St. Francis, to Hawkesbury on the Ottawa :													
Lancaster to St. Raphaels...... 6¾ miles.	40½	......	......	40½	40½	......	......	40½	The ex repa new	penditur irs and 7 road.	e was for miles of	1843...	11.295 30
Do Alexandria........ 12¾ "													
Do Lochiel............... 26¼ "													
Do Vankleek's Hill.. 34½ "													
Do Hawkesbury...... 40½ "													
Cornwall to L'Orignal..........	56	......	......	56	56	......	......	56	......	......	1847.....	1847...	3,581 72
Prescott to City of Ottawa..........	60	......	......	60	......	......	......	60	Exp. for	repairs	up to.....	1853...	3,930 70
Kingston to Ottawa..........	164	......	......	164	......	......	......	164	do	do	1851	1853...	6,000 00
Coast and Tributary Roads, North side of St. Lawrence and Lake Ontario.													
Lancaster Road, 2 M. E. of Village........	4 1/5	......	4 1/5	......	4 1/5	......	......	4 1/5	......	......	1863.....	1863...	8,284 00
Côteau and Cornwall, exclusive of Lancaster Road..........	26	......	26	......	26	......	......	26	Exp. for	repairs	up to.....	1854...	17,403 67
†Kingston to Napanee..........	25	......	25	......	......	......	......	25	4	5	Repaired	1847...	4,373 30
Port Hope to Rice Lake..........	9½	......	......	9½	......	9½	......	9½	2	2	......	1845...	29,146 29
Peterborough and Norwood..........	23½	......	......	23½	23½	......	......	23½	1	......	......	1850...	3,267 43
Peterborough and Lindsay..........	23	......	......	23	23	......	......	23	......	......	......	1850...	1,000 00
Lake Scugog to Narrows of Lake Simcoe	45	......	......	45	45	......	......	45	Exp. R.	on 14 mi Talbot.	les from	1848...	8,000 00
Whitby or Windsor Harbor to Lake Scugog	19	......	......	19	12¼	......	6¾	19	3	......	......	1851...	38,274 89
Narrows of Lake Simcoe to Sturgeon Bay or Coldwater Portage Road..........	22	......	......	22	22	......	......	22	2	......	......	1848...	16,787 10
Main North Toronto Road, as under :—													
‡Yonge Street, from Toronto to Holland's Landing..........	33½	......	......	33½	4¾	28¾	......	33½	......	6	......	1848...	163,418 28
§Holland's Landing to Bradford or West Gwilliamsbury Road..........	3	......	......	3	3	......	......	3	......	1	......	1853...	
Bradford to Bondhead (Branch)..........	7	......	......	7	7	......	......	7	......	Expendi	ture up to	1849...	D 50,282 33 includes cost of E, F, G.
Bradford to Barrie..........	20	......	......	20	20	......	......	20	3	do	do	1849...	E, for cost see D
Carried forward	......	......	......	......	......	......	......	......	......	......	......	......	$1,427,195 81

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* The Caughnawaga Roads are on the Indian Reserve in the County and Seigniory of Laprairie; $3\frac{35}{100}$ miles lead towards the Village of Ste. Martine, and $2\frac{81}{100}$ miles towards the Village of Chateauguay.

† This road was made by Trust Commissioners, and came under the management of Government in 1846.

‡ The first 12 miles from Toronto were made under the superintendence of Commissioners, and given over to Government in 1846.

§ The West Gwilliamsbury Road was improved under Commissioners, and afterwards placed under the control of Government.

APPENDIX No: 19.—*Continued.*

TABULAR STATEMENT of Roads in Canada, made, improved, or in progress of construction under the Department of Public Works.

NAME OF ROAD.	MILES IN		MILES OF		KIND OF ROAD.			Total length of Road.	NUMBER OF		YEAR.		Cost of construction since the Union.
	Town-ship.	Seig-gniory.	Main Pro-vincial Road.	Branch or Col-lateral Road.	Common or Gravel.	Maca-damised.	Planked.		Bridges.	Toll-gates.	Com-menced.	Com-pleted.	
COAST AND TRIBUTARY ROADS, NORTH SIDE OF ST. LAWRENCE AND LAKE ONTARIO.—*Continued.*					Miles.	Miles.	Miles.	Miles.	No.	No.			$ cts.
Brought forward	......	......	......	......	......	......	......	......	......	......	......	......	1,427,195 81
Main North Toronto Road.—*Continued.*													
Bondhead to Barrie (Branch)	22	......	......	22	22	......	......	22	2	......	......	1848.....	F. for cost see D.
Barrie to Penetanguishene	33½	......	......	33½	33½	......	......	33½	......	......	......	1848.....	G. for cost see D.
Toronto to Saugeen, Lake Huron	146	......	......	Survey'd	only prio	r to 1849	......	146	......	......	......	......	......
*East York, from Rouge Hill, in Pickering, to Toronto	17	......	17	......	......	6	11	17	1	4	......	1847.....	25,672 13
†West York, from Toronto to Springfield	16¼	......	16¼	......	......	16¼	......	16¼	1	4	......	1847...	Only repaired by Government.
Lake Shore Road westward from Toronto to River Humber	4	......	......	4	......	......	4	4	1	1	Not	ascer	tained.
Dundas and Owen Sound	114	......	......	114	114	......	......	114	......	......	......	1852.....	22,111 07
‡ Grimsby and Queenstown	31¼	......	......	31¼	16	15¼	......	31¼	......	1	......	1849.....	45,609 08
§ Hamilton and Port Dover, from Lake Ontario to Lake Erie	37	......	......	37	......	4¼	32¾	37	1	7	......	1846.....	170,358 85
‖ Hamilton and Brantford, including Grand River Marsh Road and Hamilton and Ancaster Road	23¾	......	23¾	......	......	13½	10¼	23¾	3	5	......	1846.....	39,953 35
Coast and Tributary Roads, north side of Lake Erie and between Lake Erie and Lake Huron.													
Brantford and London	57½	......	57½	......	......	19	38½	57½	2	11	......	1844	199,098 22
London and Port Stanley	26½	......	......	26½	......	......	26½	26½	5	7	......	1844	128,794 37
Rondeau to junction of Chatham and Amherstburgh, or Chatham and Rondeau Road	10	......	......	10	10	......	......	10	1	......	......	1847	9,375 85

Chatham, to junction of Port Stanley and London, or London and Chatham Road.	59¾	......	59¾	......	59¾	......	......	59¾	1	......	......	1845	156,700 47
Maidstone Cross and Chatham......	50	......	......	50	50	......	......	50	......	......	......	1849	18,496 59
Amherstburgh and Maidstone Cross......	16	......	......	16	16	......	......	16	......	......	......	1849	
Amherstburgh and Sandwich	14	......	......	14	14	......	......	14	......	......	......	1846	3,845 63
Sandwich and Maidstone Cross......	12	......	......	12	12	......	......	12	2	......	......	1845	7,790 23
Tecumseth, from Sandwich to Chatham..	52	......	52	......	52	......	......	52	3	......	......	1842	4,223 15
London to Port Sarnia......	61½	......	61½	......	61½	......	......	61½		......	......	1844	74,560 68
													$2,333,785 48
Deduct Kempt road, built prior to Union													29,064 00
Total since the Union (10th February, 1841) up to 1st July, 1867......													$2,304,721 48

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* The Trust Commissioners expended $90,697 98 on West Section, and resigned it to the Government in 1846. A sum of $20,809.63 has been expended for repairs from 1st January, 1864, to 1st July, 1867, on the Yonge Street, East York, West York, and Lake Shore Roads..

† This road was made under Commissioners, and given over to the Government in 1846. It was worn out in many places when assumed by Government.

‡ Part of this road was done under Trustees, and part under the Board of Works.

§ $18,946.48 have been expended on repairs from 1st January, 1863, to 1st July, 1867.

‖ Of this road, 13½ miles were made by Commissioners, and assumed by Government in 1846; and 10¼ by the Board of Works. The portion made by the Board is called the Grand River Swamp Road.

GENERAL REMARKS RESPECTING ROADS.

The preceding statements of Appendix No. 19, shewing the roads made or improved under the Department of Public Works or otherwise, is based on Appendix N. (in Commissioner of Public Works report for 1848) prepared by J. Stewart, C. E., and myself, and on other official documents of a more recent date.

The expenditure marked for construction is that only which was incurred under the Department of Public Works, up to the time each road was completed, unless otherwise stated in the notes of reference..

Under the heading of Bridges and Toll Gates, I have entered only the most important bridges, and the number of gates on the roads during the time they were under the management of the Department. A list of the roads transferred, leased, sold or abandoned, by the Government, will be found in Appendix No. 26, from page 311 to 322.

The total expenditure, before and since the Union, (10th Feb., 1841) up to 1st July, 1867, from the funds of the Provincial Government, for the Construction of Roads enumerated in the preceding statement, is as follows, viz.:

	Before the Union, as far as ascertained.	Since the Union, under Dept. of Public Works.	Total Cost of Construction.
Total Expenditure for Construction......	$980,850 00	$2,304,721 48	$3,285,571 48
Add expenditure on roads in Johnstown District, not enumerated in preceding statement..	27,022 22	......	27,022 22
Total Cost of Construction, up to 1st July, 1867	$1,007,872 22	$2,304,721 48	$3,312,593 70

The above expenditure includes a sum of $91,095 72 spent on Bridges. (See detailed expenditure on Bridges from page 180 to 192) in Appendix No. 19.

A list of the Turnpike Roads constructed in Lower Canada, under the authority of Government, and the cost of construction will be found on the following pages from 174 to 180, in Appendix No. 20.

OTTAWA, 23rd Nov., 1867.

G. F. BAILLAIRGE, C. E.

(No. 180.) APPENDIX

TABULAR DESCRIPTION of Roads and Works under the control of

NAME OF ROAD AND ITS LOCALITY.		District.	MILES OF Main Road.	 Branch Road.
			M. Ch.	M. Ch.
St. Louis Road	From city limits to north-east boundary of bridge at Carouge	Quebec		7 35
Ste. Foye "	From city limits to junction with St. Louis Road at the top of Carouge Hill	do	6 66	
Suède "	From city limits for a distance of eight miles and eighteen chains	do		8 18
Cove "	From its intersection with Ste. Foy Road to the foot of Champigny Hill	do	2 46	
St. Charles, North "	From its intersection with St. Charles South to Commissioners' Bridge	do		3 50
St. Charles, South "	From city limits to Commissioners' Bridge	do		4 51
Beauport "	" " Montmorency "	do	6 40	
Kilmarnock "	Connecting St. Louis and Cove Roads	do		0 39
Champigny W. and St. Augustin Road	From its intersection with Suède Road for a distance of seven miles	do	4 37	
Belvedère Road	Connecting Ste. Foy and St. Louis Roads	do		0 35
Route Ste. Foy	" St. Louis, Ste. Foy and Cove Roads	do		2 62
Champigny, East Road	From Champigny Hill to its junction with Ormière Road	do		2 29
St. Gabriel Road	From its junction with Champigny East to boundary between Counties of Quebec and Port-neuf	do		1 08
Ormière "	From its junction with St. Charles North, South to bridge over St. Charles, at Indian Lorette	do		4 24
Ste. Claire "	From its junction with St. Charles North, to its junction with St. Joseph Road	do		3 12
Valcartier "	From the Village of St. Ambroise to River Jacques Cartier	do		9 00
Ange-Gardien "	From Montmorency Bridge to boundary between parishes of Ange-Gardien and Château-Richer	do	5 12	
Château-Richer "	From junction with Ange Gardien Road to Sault à la Puce	do	3 26	
Charlesbourg and St. Pierre Road	From Dorchester Bridge to junction with roads leading to Stoneham and Lake Beauport.	do		7 72
St. Joseph Road.	From bridge over St. Charles, at Indian Lorette, to its junction with Charlesbourg Road	do		4 70
Holland "	Connecting Ste. Foy and St. Charles Road, South	do		1 07
Smith's "	" St. Charles Road, North, and Charlesbourg Road.	do		1 56
Dorchester Bridge				
Montmorency "				
Carouge "	Built before establishment of the Trust, and placed	under their	jurisdi	ction,
Laval Road.	From junction with Beauport Road for a distance of 3 miles	do		3 00
Bourg Royal "	From junction with Beauport Road for a distance of 2 miles	do		2 00
St. Richard "	Connecting St. Louis and Cove Road	do		0 45½
Misère "	From junction with St. Charles North to junction with St. Joseph Road	do		3 51
Stoneham "	From junction with Charlesbourg and Lake Beauport Roads, for a distance of 4½ miles	do		4 40
Lake Beaport "	From junction with Charlesbourg and Stoneham Roads for a distance of 2 miles	do		2 00
Charlesbourg and Lorette Road	From junction with Charlesbourg and St. Pierre to St. Joseph Road, near Indian Lorette	do		2 52
Totals			28 67	81 36½

No. 19.—*Continued.*

the Trustees of the Quebec North Shore Turnpike Roads.

Kind of Road.			Total length of Road.	Number of			Year of Completion. (Finished portions.)	Cost of Construction, since the Union.	Average cost per mile, Construction.	REMARKS.
Common or Graded.	Macadamized	Planked.		Bridges.	Culverts.	Toll-gates.				
M. Ch.	M. Ch.	M. C	M. Ch.					$ cts.	$ cts.	General Remark.
....	7 35	......	7 35	1	49	1	1850	48,407 00	6,508 00	The Secretary of the Quebec North Shore Turnpike Roads—J. Porter, Esquire—in "No. 180" of the 5th July, 1867, reports as follows, respecting the state of these roads:— "The roads described are all in the best state of repair, as well as the bridges, with the exception of Dorchester Bridge which was destroyed by fire two years ago; although a temporary bridge has hitherto been made to serve as a substitute, it must shortly be replaced by a solid structure."
....	6 66	......	6 66	1	46	1	1853	29,220 00	4,281 00	
1 20	4 00	1	8 18	.....	37	1	....	35,328 00	7,065 00	
....	2 46	.....	2 46	....	8	.....	1850	15,256 00	5,924 00	
....	3 50	......	3 50	5	24	......	1850	25,748 00	7,356 00	
....	4 51	......	4 51	2	26	1	1850	27,690 00	5,971 00	
....	6 40	......	6 40	2	49	......	1850	29 016 00	4,464 00	
....	0 39	......	0 39	......	3	......	1850	1,834 00	3,760 00	
....	4 37	......	4 37	2	20	......	1857	16,657 00	3,733 00	
....	0 35	......	0 35	......	2	......	1853	1,847 00	4,222 00	
....	1 42	......	2 62	.....	2	.....	1855	5,357 00	3,512 00	
....	2 29	......	2 29	1	20	.....	1850	9,374 00	3,968 00	
....	1 08	......	1 08	2	4	......	1855	6,406 00	5,823 00	
....	4 24	....	4 24	1	28	......	1853	14,939 00	3,474 00	
3 12	....	......	3 12	......	....	......	1855	11,471 00	3,641 00	
....	3 00	.....	9 00	1	6	......	1857	16,996 00	5,665 00	
....	5 12	......	5 12	5	86	......	1852	20,667 00	4,013 00	
....	3 26	......	3 26	7	78	......	1857	24,562 00	7,387 00	
....	7 72	......	7 72	8	38	......	1856	34,243 00	4,334 00	
....	4 70	......	4 70	2	26	......	1855	19,062 00	3,910 00	
0 27	0 60	. ...	1 07	......	2	....	1857	8,247 00	7,583 00	
1 56	....	......	1 56	......	....	......	1855	5,384 00	3,167 00	
....	....	......	....	1	....	1	1851	40,120 00	....	Built of wood.
....	....	.....	....	1	....	1	1859	59,947 00	....	do
by 4 V	ic., Ca	p. 31	in1841	1	....	1	....	....	....	See cost at page 185.
....	....	.....	3 00	......	....	.....	....	1,235 00	....	Commenced in 1855.
....	....	.....	2 00	......	....	......	....	....	....	Not yet constructed.
....	....	......	0 45½	......	....	......	....	....	....	do do
....	....	.....	3 51	......	....	.....	....	....	....	do do
....	....	......	4 40	......	....	......	....	....	....	do do
....	....	......	2 00	......	....	......	....	477 00	....	Commenced in 1855.
....	....	......	2 52	......	....	......	....	....	....	Not yet constructed.
15 53	75 22	1 00	110 23½	43	554	7	....	$509,490 00	....	

(No. 85,630.)

APPENDIX

TABULAR DESCRIPTION of Roads and Works under the jurisdiction

NAME OF ROAD.	District.	County.	Miles in Township.	Miles in Seigniory.	Miles in Main Road.	Miles in Main Collateral Road.
Beaumont	Quebec	Levis		10½	10½	
St. Henri	do	do		13½	13½	
St. Nicolas	do	do		9	9	
Etchemin Bridge	do	do				
Totals				33	33	

Road, &c., under the jurisdiction of

Longueuil and Chambly, from Longueuil Ferry to Chambly	Montreal	Montreal				16
Longueuil Ferry, for crossing River St. Lawrence to Montreal	do	do				
Totals						16

REMARKS ON QUEBEC SOUTH

These roads were commenced by the Trustees of the Quebec Turnpike Roads in 1853—16 Vic.,
Vic. Cap. 125.
All these roads are macadamized, so far as completed, and the bridges are constructed of wood.
The average yearly gross revenue amounts to a sum of $8000, which is generally absorbed by
The yearly expenditure is said to be greatly increased on account of the maintenance of three
Their Secretary, (Chs. Bourget, Esq.) states that they are compelled to maintain these three miles
(See Mr. Bourget's report No. 163, of 4th July, 1867.
The sums in the column of "Cost of Construction," with the prefix of a star (*), are those which
The Etchemin Bridge, on the St. Nicholas road, is under the control of the Quebec South Shore

REMARKS ON LONGUEUIL

For Longueuil Turnpike Road, &c., See—

Acts 57 Geo. 3, Cap. 13, of 22 March, 1817—granting £500; Act 4 Vic. — Cap. 16, of 27 January,
Cap. 56, 29 March, 1845,—authorizing the raising of a loan of £4,000; Act 13-14 Vic. —
1091) of 26 March, 1852,—Road sold to a Joint Stock Company for £150; By an Order
of 11th May, 1858,—Road transferred to Municipal Councils of the Village of Longueuil,

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For list of Acts concerning the various Turnpike Roads of Lower Canada, enumerated in this

No. 19.—*Continued.*

of the Trustees of the Quebec South Shore Turnpike Roads.

Kind of Road.			Total length of Road	Number of			Year of Completion. (Finisned portions.)	Cost of Construction since the Union.	Average cost per mile, Construction.
Common or Gravel.	Macadamized	Planked.		Bridges.	Culverts.	Toll-gates.			
								$ cts.	$ cts.
4½	6	....	10½	8	32	1	1859	*28,450 00 8,600 00	....
2¾	10¾	....	13½	6	40	1	1858	*69,702 00 10,800 00	....
4	5	....	9	4	20	1	1858	*9,200 00 27,826 00	....
....	....	....	....	1	....	1	1843	1,400 00	....
11¼	21¾	....	33	19	92	4	....	155,978 00	4,726 61

the Longueuil Turnpike Trustees.

....	....	16	16	10	....	4	1842........	60,936 78	3,808 55
....	....	....	....	....	....	....	1842	13,549 90	....
....	....	16	16	10	....	4	....	74,486 68	....

SHORE TURNPIKE ROADS.

Cap. 235—and placed in 1857 under the Trustees of the Quebec South Shore Turnpike Roads—20

the cost of repairs, collection of tolls, and interest.
miles of road in the Town of Lévis, by the Q. S. S. Turnpike Trustees.
of road, although the Town should do so, as required by Cap. 85, of the Consolidated Statutes.—

were expended by the Quebec North Shore Turnpike Trust, as per No. 85,191 of 10th April, 1867.
Turnpike Trust, in virtue of the Act 18 Vic., Cap. 160.

TURNPIKE ROAD, &c., &c.

1841,—authorizing appointment of Trustees and the raising of a loan of £15,000; Act 8 Vic.—
Cap. 106 of 10 August, 1850,—Road vested in Board of Works; By an Order in Council, (No.
in Council (No. 1422) of 26 May, 1856,—Road resumed by Government; Canada *Gazette*, page 87,
Basin of Chambly and Canton of Chambly for 5 shillings.

Appendix (No. 19) see Appendix No. 57.—G. F. B.

TABULAR DESCRIPTION of Roads and Works under

NAME OF ROAD.	District.	County.	MILES IN		MILES OF		KIND
			Townships.	Seigniories.	Main Provincial road.	Branch or Collateral road.	Common or Graded.
				Miles.	Miles.	Miles.	Miles.
Upper Lachine, from the city limits to opposite the steamboat landing, at the Village of Lachine	Montreal.....	Jacques Cartier and Hochelaga.	....	6 96	6 96	....	....
Lower Lachine, from the City limits to the intersection with the Upper Lachine, at the toll gate, lower end of the Lachine Village	Montreal ..	do	....	8 74	....	8 74	....
Pavilion, from intersection with Lower Lachine at the Pavilion Tavern (Race Course) to intersection with Upper Lachine at the Village of the Tanneries	Montreal ...	Hochelaga	....	2 28	....	2 28	....
St. Luc, from intersection with Upper Lachine at the Tannery Hill, to the intersection with Côte-des-Neiges, at the Village of Côte-des-Neiges	Montreal ...	do	....	4 38	....	4 38	....
St. Antoine, from intersection with St. Luc to the city limits	Montreal ...	do	....				
Côte-des-Neiges, from city limits to Abord à Plouffe	Montreal ...	Jacques Cartier and Hochelaga.	....	7 86	....	7 86	....
Victoria, from city limits to intersection with St. Catherines	Montreal ...	Hochelaga	....	1 16	....	1 16	....
St. Catherines, from its intersection with the Victoria, to its intersection with the Côte-des-Neiges	Montreal ...	do	....	4 31	....	4 31	....
St. Laurent, from city limits to centre of the Village of Sault au Recollet	Montreal ...	Jacques Cartier and Hochelaga.	....	7 05	....	7 05	....
Quebec, from city limits to Bout de l'Ile	Montreal ...	Hochelaga	....	12 50	12 50	....	....
Totals	....	....	....	55 24	19 46	35 78	....

GENERAL REMARKS

The list of the Quebec North Shore Turnpike Roads was furnished by J. A. Porter, Esq.,
" South Shore Turnpike Roads was furnished by Charles Bourget, Esq.,
" Longueuil Turnpike Roads is taken from Report of Commssioners of Public
" Montreal Turnpike Roads was furnished by John Penner, Esq., Secretary

The total expenditure, before and since the Union, (10th Feb., 1841) up to 1st July, Roads above enume

NAME OF ROAD.
Quebec Turnpike Roads, North Shore..
Do do South Shore..
Longueuil Turnpike Road and Ferry..
Montreal Turnpike Roads..
Total for construction only, up to 1st July, 1867..

NOTE.—The sums expended before the Union, to which * is prefixed shew only the amount for dated 27th July, 1867.

OTTAWA, 23rd Nov., 1867.

No. 19.—*Continued.*

the Jurisdiction of the Montreal Turnpike Trustees.

of Road.		Total length of Road.	Number of		Year of Completion.	Cost of Construction, since the Union.	Average cost per mile, construction	REMARKS.
Macadamiz'd	Planked.		Bridges.	Toll Gates.				
Miles.		Miles.				$ cts.	$ cts.	
6 96	......	6 96	......	2	1842	34,026 80	4,888 90	The jurisdiction of the Montreal Turnpike Trustees, as reported by John Penner, Esq., Secretary M. T. T., in No. 296, of 18th July, 1867, extends over 55 miles of macadamized road, which, though technically a "Continuous Road," actually consists of nine distinct roads, viz., the Upper Lachine, Lower Lachine, St. Antoine, St. Luc, L'Abord à Plouffe, Ste. Catherine, St. Laurent, Victoria, and Quebec. These roads are constructed chiefly of grey limestone; some portions are laid with broken field stones, and about five miles where the traffic is very heavy, with "whin stone" or "banc rouge." They are in the most perfect state of repair, and give general satisfaction. The Board of Trustees consists of nine members, who are appointed by the Government. They were appointed in 1840, and commenced operations in July of that year. The expenditure for the construction of the Montreal Turnpike roads, includes $7,115 77 for Toll Houses; $5,970 88 for fences, land, &c., and $27,725 85 for repairs. The cost of construction was defrayed by loans raised from private parties by the Trustees, the Government being only responsible for the payment of the interest, if the revenue was insufficient. The annual average repairs vary from $105 to $419 per mile. Since 1842 fifteen miles of the roads have been widened from 36 to 50 French feet, and three new toll houses have been constructed.
8 74	.....	8 74	......	1	1848	29,237 50	3,345 25	
2 28	......	2 28	....	.. ..	1842	8,922 78	3,913 50	
4 38	.....	4 38	......	1	1842	15,528 60	3,545 34	
7 86	......	7 86	......	1	1842	33,630 82	4,278 73	
1 16	......	1 16	......	1	1842	5,891 33	5,078 73	
4 31	......	4 31	......	......	1842	15,727 58	3,649 09	
					1842			
					1842			
7 05	......	7 05	......	1		29,509 21	4,185 70	Upwards of ten miles of this road were originally planked, but were afterwards macadamized; the plank lasted 5 years. In 1849 the macadamization was completed, but no separate account was kept of the conversion from wood to stone.
12 50	......	12 50	......	2		57,884 58	4,630 76	
55 24	......	55 24	......	9	......	230,359 20	4,170 15	

RESPECTING TURNPIKE ROADS.

Sectretary Q. N. S. T. R., as per Nos. 85,191—180 of 10th April and 5th July, 1867.
Secretary Q. S. S. T. R., as per Nos. 85,630—163 of 10th May and 4th July, 1867.
Works for 1848., as per Appendix N.
M. T. R., as per Nos. 84,801—296 of 15th March and 18th July, 1867.

1867, from the funds of the Provincial Government, for the construction of the Turnpike rated, is as follows :

Before the Union, as far as ascertained.	Since the Union.	Total cost of Construction.
$*135,400 00	$509,490 00	$644,890 00
....	155,978 00	155,978 00
*60,000 00	74,486 68	134,486 68
*188,000 00	230,359 20	418,359 20
$383,400 00	$970,313 88	$1,353,713 88

which debentures were issued, and are taken from a return made to the Legislative Assembly, and

G. F. B.

APPENDIX

TABULAR STATEMENT

SHEWING the Dimensions, Cost, &c., of these Works constructed, in progress

Number of Bridge.	NAME OF BRIDGE.	IN WHAT				ON WHAT ROAD.	
		District.	County.	Township.	Seigniory.	Main or Branch	Name of Road.
	EASTERN CANADA, BELOW QUEBEC.						
1	Rivière du Loup..................	Gaspé....	Bonaventure.	Mann ...	None.. ...	Main.. ...	Grande Nouvelle on north side of the Baie des Chaleurs.
2	Sutherland's Brook, West.. ...	do ...	do ...	do ...	do ...	do ...	do ......
3	Sutherland's Brook, East......	do ...	do ...	do ...	do ...	do ...	do ......
4	Harper's Brook....................	do ...	do ...	do ...	do ...	do ...	do ......
5	Murray's Brook, West....	do ...	do ..	do ...	do ...	do ...	do ......
6	do East..	do ...	do ...	do ...	do ...	do ...	do ... ..
7	Mann's Brook......................	do ...	do ...	do ...	do ...	do ...	do ......
8	Second Brook.........	do ..	do ...	do ...	do ...	do ...	do ......
9	Busteed's Brook............	do ...	do ...	do ...	do ...	do ...	do ......
10	Scumenac....................	do ...	do ..	Nouvelle	School-bred.	do ...	do ......
11	Grande Nouvelle...................	do ...	do ...	do ...	do ...	do ...	do ......
12	Kenmore..............................	do ...	do ...	Maria ...	do ...	do ...	do ......
13	McNiel's..................	do ...	do ...	Cox	do ...	do ...	do ......
14	East Nouvelle.....................	do ...	do ...	Hope.....	do ...	do ...	do ......
15	Little Port Daniel..................	do ...	do ...	Port Daniel..	do ...	do ...	do ......
16	L'Anse à Gascon..................	do ...	do ...	do ...	do ...	do ...	do ......
17	Day's Brook........................	do ...	Gaspé ...	do ...	do ...	do ...	Port Daniel to Grand River.
18	Fahie's Brook...............	do ...	do ...	do ...	do ...	do ...	do ....
19	L'Anse à Canard.................	do ...	do ...	do ...	do ...	do ...	do ......
20	L'Anse à Chaloupe...............	do ...	do ...	Newport	do ...	do ...	do ......
21	Little Pabos............	do ...	do ...	do ..	Pabos ...	do ...	do ......
22	Broche à Menon..................	do ...	do ...	do ...	Grand River.	do ...	Grand River to Percé......
23	Little River..........................	do ...	do ...	do ...	do ...	do ...	do ......
24	L'Anse à Beaufils.................	do ...	do ...	Percé.....	do ...	do ...	do ......
25	Watering Brook	do ...	do ...	Gaspé Bay, N.	None.. ...	do ...	Peninsula and Grande Grève, on north side of Gaspé Bay.
26	Great Fox River...................	do ...	do ...	Fox	do ...	do ...	South Shore, Gulf Road...
27	Ruisseau de la Wapper.........	Rimouski.	Rimouski.	Dalibaire.	do ...	do ...	Cap de Chatte à Matane...
28	Ruisseau à Sem...	do ...	do ... do ...	Cherbourg.	do ...	do ...	do ... ..
29	Métis...............	do ...		....	Métis.....	do ...	Kempt Road.................
30	20th Mile........	do ...	do ..	Crown Land Allotments.	....	do ...	do ......
31	St. Pierre......	do ..	do ...	do ...	S. Métapédiac..	do ...	....
32	Métapédiac.........................	do ...	do ...	do ...	....	do ...	do ......
33	Causapscal...............	do ...	do ...	do ...	....	do ...	do ......
34	Assametquagan....................	Gaspé....	Bonaventure.	Assametquagan.	....	do ...	do ......
	Carried forward.........	....	....	....	....	....	....

No. 20.

OF BRIDGES IN CANADA,

of construction, improved or repaired by the Department of Public Works.

Over what River.	Kind of Truss.	Roofed or not roofed.	Dimensions in Feet.		Year of Completion.	Cost of Construction, since the Union.	REMARKS.
			Length.	Breadth.			
			ft.	ft.		$ cts.	
Rivière du Loup...	Stringers......	Not roofed	180	These Bridges vary from 16 to 18 feet in width between the guard-rails and side-trusses.	1843	240 63	GENERAL REMARK. The cost of these bridges is included in that of the Gaspé and Kempt Roads, and amounts to the sum of $17,818.21. Most of these works have been rebuilt or repaired since, at the expense chiefly of the Municipalities to whom they have been transferred.
Sutherland's Brook.	do	do ...	100		1843	135 13	
do	do	do ...	100		1843	138 05	
Harper's Brook......	do	do ...	80		1843	139 50	
Murray's Brook.....	do	do ...	80		1843	88 95	
do	do	do ...	77		1843	63 62	
Mann's Brook........	do	do ...	60		1843	56 90	
Second Brook.........	do	do ...	60		1843	60 60	
Busteed's Brook.....	do	do ...	114		1843	178 43	
Scumenac..............	Queen Post...	do ...	132		1843	452 28	
Grande Nouvelle....	King Post.....	do ...	282		1843	1,137 00	
Kenmore	Stringers.. ...	do ...	132		1846	120 00	
do	do	do ...	150		1843	256 63	
East Nouvelle........	do	do ...	352		1843	....	
Little Port Daniel...	Queen Post...	do ...	160		1843	492 08	
L'Anse à Gascon ..	Stringers ..	do ..	76		1843	112 63	
Day's Brook.........	Stringers and Struts..	do ...	234		1843	703 32	
Fahie's Brook.......	do	do ...	132		1843	283 16	
L'Anse à Canard....	Queen Post...	do ...	124		1843	375 55	
L'Anse à Chaloupe..	King Post & Stringers.	do ...	102		1843	460 23	
Little Pabos.........	Queen Post...	do ...	360		1843	2,093 76	
Broche à Menon.....	Stringers	do ...	183		1843	419 43	
Little River...........	do	do ...	113		1843	708 46	
L'Anse à Beaufils...	do	do ...	492		1843	678 47	
Watering Brook......	King Post...	do ...	....		1859	600 00	
Great Fox River....	do	do ...	....		....	Not ascert'd.	
Wapper's Brook.....	Stringers and Bents.	do ...	188		1865	1,491 58	
Sem's Brook..........	do	do ...	200		1865	1,272 57	
Métis....................	Queen Post...	do ...	360		1847	1,855 53	
20th Mile..........	Stringers.. ...	do ...	115		1844	279 07	
St. Pierre..............	do	do ...	130		1844	320 38	
Métapédiac............	Queen Post...	do ...	200		1844	1,048 00	
Causapscal............	do	do ...	114		1844	907 72	
Assametquagan.. ...	do	do ...	150		1844	648 55	
....	....	....	....	....	....	17,818 21	

APPENDIX

TABULAR STATEMENT of Bridges in Canada, shewing the dimensions, cost, &c., the Departmen

Number of Bridge.	NAME OF BRIDGE.	In what				On what Road.		
		District.	County.	Township.	Seigniory.	Main or Branch	Name of Road.	
	EASTERN CANADA, BELOW QUEBEC.—*Continued.*							DISTANCE *from Ste. Flavie.*
35	*Brought forward*							
36	Gagnon's Gully	Rimouski.	Rimouski.	None	Lepage & Thibierge.	The Military Road between the St. Lawrence, at Ste. Flavie, and the North-eastern portion of the Province of New Brunswick, at Campbellton.	Métapédiac Road.	6¾ miles.
37	River Métis	do	do	do	do		do	7 "
38	Paquet's Brook	do	do	do	do		do	11 "
39	River Tartigou, West	do	do	do	do		do	23 "
40	Do East	do	do	do	do		do	24 "
41	Lot No. 4	do	do	do	do		do	25 "
42	Do 5	do	do	do	do		do	25 "
43	Do 7	do	do	do	do		do	26 "
44	Gosselin's Brook	do	do	do	do		do	30 "
45	Do Elie Poirier	do	do	do	Métapédi'c		do	32 "
46	Do Pierre Brochu	do	do	do	do		do	33 "
47	St. Pierre	do	do	do	do		do	34 "
48	Lot No. 1, Central Div.	do	do	do	do		do	36 "
49	Do 14, do	do	do	do	do		do	38 "
50	Do 44, do	do	do	do	do		do	45 "
51	Do 55, do	do	do	do	do		do	48 "
52	Métapédiac	do	do	do	do		do	49 "
53	Lot No. 60, Central Div.	do	do	do	do		do	49 "
54	Do 63, do	do	do	do	do		do	50 "
55	Michaud's Brook	do	do	do	None		do	53 "
56	Lot No. 86, Central Div.	do	do	do	do		do	56 "
57	Do 92, do	do	do	do	do		do	57 "
58	Prevost's	do	do	do	do		do	60 "
59	Lot No. 106, Central Div.	do	do	do	do		do	61 "
60	Do 108, do	do	do	do	do		do	61 "
61	Causapscal	do	do	do	do		do	61 "
62	Lot No. 1, South Div.	do	do	do	do		do	62 "
63	Smith's Brook	do	do	do	do		do	65 "
64	Peter's Brook	do	do	do	do		do	71 "
65	Brook	do	do	do	do		do	74 "
66	Connor's Gully	Gaspé	Bonaventure.	Assametquagan.	do		do	79 "
67	Swasin's do	do	do	do	do		do	80 "
68	Brown's do	do	do	do	do		do	80 "
69	Assametquagan	do	do	do	do		do	84 "
60	Three Islands Gully	do	do	Ristigouche.	do		do	87 "
71	Clarke's Brook	do	do	do	do		do	90 "
72	Sandy Hill Brook	do	do	do	do		do	90 "
73	No Man's Island Gully	do	do	do	do		do	90 "
74	Kean's Valley	do	do	do	do		do	91 "
75	Do Brook	do	do	do	do		do	91 "
76	Andrew Mann's Valley	do	do	do	do		do	92 "
77	Do Brook	do	do	do	do		do	92 "
78	Prentice's Brook	do	do	do	do		do	92 "
79	Gilmour's Brook	do	do	do	do		do	93 "
80	Brook	do	do	do	do		do	94 "
81	Do	do	do	do	do		do	95 "
	Do	do	do	do	do		do	95 "
	Carried forward							

No. 20.—*Continued.*

of these Works constructed, in progress of construction, improved or repaired by of Public Works.

Over what River.	Kind of Truss.	Roofed or not roofed.	Dimensions in feet.		Year of Completion.	Cost of Construction, since the Union.	REMARKS.
			Length.	Breadth.			
			ft.	ft.		$ cts.	
....	....	....	......	......	......	17,818 21	The Bridges constructed on the Métapédiac Road, since 1862, are sufficiently strong for the passage of artillery. Those across ravines and small streams are built of round cedar timber, and consist generally of cribs 20 feet apart, connected at the top by a single or double course of stringers from three to four feet apart, covered over with sticks of cedar, with a layer of fascines and a coating of gravel for the roadway. The bridges across the large streams consist generally of piers built of close-jointed counterhewn pine or cedar and ballasted with stone. These piers are connected at the top by five stringers at equal distances apart, the outside stringers across the main spans between the piers are strengthened by King-post or Queen-post trusses; the platform which forms the roadway of the trussed bridges is of flatted cedar timber, 6 inches in thickness, resting on the 3 stringers which connect the piers; the superstructure of these bridges is always of counterhewed pine and cedar. The cost of the bridges, on the Mètapediac road, amounts to the sum of $39,867.60 and is included in the cost of the road. (See Appendix No. 19, Page 167.
Gagnon's Gully	Stringers	Not roofed.	151	16	1863	392 60	
Metis	King Post	do	273	16	1863	3,794 00	
Paquet's Brook	Stringers	do	150	16	1861	134 00	
River Tartigou, West.	do	do	142	16	1861	210 00	
do East.	do	do	122	16	1861	123 00	
Brook	do	do	150	16	1866	300 00	
Brook	do	do	175	16	1866	350 00	
Brook	do	do	60	16	1866	108 00	
Gosselin's Brook	do	do	100	16	1863	190 00	
Poirier's do	do	do	186	16	1863	483 60	
P. Brochu's do	do	do	180	16	1863	288 00	
River St. Pierre	do	do	184	16	1866	1,000 00	
Brook	do	do	50	16	1865	105 00	
do	do	do	200	16	1866	420 00	
do	do	do	60	16	1865	102 00	
do	do	do	192	16	1866	288 00	
River Métapédiac	Queen Posts	do	200	16	1866	2,987 00	
Brook	Stringers	do	370	16	1867	1,554 00	
do	do	do	126	16	1866	214 20	
Michaud's Brook	do	do	197	16	1865	413 70	
Brook	do	do	75	16	1865	120 00	
do	do	do	60	16	1866	102 00	
Prevost's Brook	do	do	286	16	1866	1,487 20	
do	do	do	94	16	1866	329 00	
do	do	do	60	16	1866	174 00	
River Causapscal	King Post	do	264	16	1866	3,445 00	
Brook	Stringers	do	89	16	1863	244 75	
Smith's Brook	do	do	180	16	1864	522 00	
Peter's Brook	do	do	60	16	1863	114 00	
Brook	do	do	150	16	1863	545 00	
Connor's Gully	Stringers on Crib work.	do	215	16	1866	720 00	
Swasin's do	do	do	49	16	1865	115 00	
Brown's do	do	do	60	16	1865	165 00	
River Assametquagan,	King Post	do	165	16	1863	2,745 00	
Ravine	Stringers on Crib work.	do	150	20	1863	390 00	
Clarke's Brook	do	do	277	20	1862	1,080 00	
Sandy Hill do	do	do	150	20	1862	570 00	
No man's Island Gully.	do	do	181	20	1862	900 00	
Kean's Gully	do	do	138	20	1862	311 40	
do Brook	do	do	144	20	1861	590 00	
Andrew Mann's Valley.	do	do	100	20	1861	160 00	
do Brook	do	do	127	20	1861	564 00	
Prentice's Brook	do	do	62	20	1860	217 00	
Gilmour's Brook	do	do	250	19	1860	650 00	
Brook	do	do	85	19	1860	195 00	
do	do	do	160	18	1859	347 00	
do	do	do	48	18	1859	110 40	
....	....	....	......	......	......	48,188 06	

APPENDIX

TABULAR STATEMENT of Bridges in Canada, Shewing the dimensions, cost, &c., the Department

Number of Bridge.	NAME OF BRIDGE.	IN WHAT				ON WHAT ROAD.	
		District.	County.	Township.	Seigniory.	Main or Branch	Name of Road.
	EASTERN CANADA, BELOW QUEBEC.—*Continued.*						DISTANCE *from Ste. Flavie.*
	Brought forward						
82	Fraser's Brook	Gaspé	Bonaventure.	Ristigouche.	None	Military Road between the St. Lawrence, at Ste. Flavie, &c., &c.	Métapédiac Road, 97 miles
83	Chamberlin's Brook	do	do	do	do		do 98 "
84	Larkin's do	do	do	do	do		do 98 "
85	Calder's do	do	do	do	do		do 99 "
86	Brook	do	do	do	do		do 99 "
87	Flat Lands Brook	do	do	do	do		do 99 "
88	Hugh Fraser's do	do	do	do	do		do 102 "
89	Petite Rivière	do	do	do	do		do 107 "
90	Rimouski	Rimouski.	Rimouski.	None	Lepage and Thibierge.	Main Road.	South Shore Gulf Road
							DISTANCE *from R. Du Loup.*
91	St. Patrick or Old Bridge at Rivière du Loup.	Kamouraska.	Témiscouata.	do	Rivière du Loup.	Military Road between the St. Lawrence, at Rivière du Loup, and the north-western portion of the Province of N. Brunswick, near the River Madawaska.	Témiscouata Road, 2 miles.
92	New Bridge	do	do	do	do		do 2 "
93	Rivière Verte	do	do	do	do		do 9 "
94	St. François	do	do	do	do		do 17 "
95	Ruisseau Montagne Rocheuse.	do	do	do	do		do 34 "
96	Ruisseau de la Savanne	do	do	do	Témiscouata.		do 35 "
97	Ha! Ha! or Petite Rivière.	do	do	do	do		do 39 "
98	River Cabano	do	do	do	do		do 42 "
99	River Thériault	do	do	do	do		do 51 "
100	Pollock's Brook	do	do	do	do		do 52 "
101	Rivière aux Perches	do	do	do	do		do 58 "
102	Rivière aux Bouleaux, W. Branch.	do	do	do	do		do 60 "
103	Rivière aux Bouleaux, E. Branch.	do	do	do	do		do 60 "
104	Rivière aux Bouleaux, N. Branch.	do	do	do	do		do 64 "
105	Syriac's Brook, West	do	do	do	do		do 65 "
106	Do East	do	do	do	do		do 65 "
107	Grande Bergeronne	Saguenay.	Saguenay.	Tadousac	None	Main Road.	North Shore Gulf Road, Escoumains to Tadousac.
108	River Malbaie	do	Charlevoix.	None	Malbaie	do	Malbaie and Grande Baie
	ABOVE QUEBEC.						
109	Cap Rouge	Quebec	Quebec	do	Gaudarville.	do	Quebec and Montreal, along North Shore of St. Lawrence.
110	Jacques Cartier	do	Portneuf	do	Jacques Cartier.	do	do do
111	Champlain	Three Rivers.	Champlain.	do	Champlain	do	do do
112 113	Ste. Anne (2 Bridges)	do	do	do	Ste. Anne	do	do do
	Carried forward						

No. 20.—*Continued.*

of these works constructed, in progress of construction, improved or repaired by of Public Works.

Over what River.	Kind of Truss.	Roofed or not roofed.	Dimensions in feet. Length.	Dimensions in feet. Breadth.	Year of Completion.	Cost of Construction, since the Union.	REMARKS.
			ft.	ft.		$ cts.	
......	......	......	......	......	......	48,188 06	See general remark on page 183.
Fraser's Brook	Stringers on crib-work.	Not roofed.	160	18	1859	656 60	
Chamberlin's Brook	do	do	83	18	1858	265 50	
Larkin's do	do	do	141	18	1858	493 50	
Calder's do	do	do	439	18	1858	2,208 35	
Brook	do	do	82	18	1858	155 80	
Flat Lands Brook	do	do	120	18	1858	474 00	
Hugh Fraser's do	King Post	do	143	16	1867	994 00	
Little River	Stringers on Piers.	do	1,853	16	1867	4,250 00	
Rimouski	Arch and Truss	do	645	......	1849	5,516 60	The Rimouski Bridge has since been re-built by the Municipality with Queen Post Trusses.
Rivière du Loup	King Post	do	240	16	1841	About 2,200 00	Constructed under Local Commissioners. No details obtained.
do	Queen Post	do	240	18	1867	4,080 66	Old Bridge rebuilt.
Rivière Verte	King Post	do	207	16	1861	5,856 00	
St. François	do	do	74	16	1857	624 00	
Montagne Rocheuse Brook.	Stringers	do	60	16	1861	120 00	The King-post and Queen-post bridges on the Témiscouata road are similar to those on the Métapédiac road; the small bridges are generally built of square pine timber; all the bridges on the Témiscouata road have been designed for the passage of artillery, Their cost amounting to $22,580.66, is included in that of the road. See App. No. 19, page 168.
Swamp Brook	King Post	do	70	16	1861	610 00	
Little River	do	do	66	16	1859	530 00	
Cabano River	do	do	196	16	1861	1,416 00	
Thériault do	do	do	498	16	1861	2,797 00	
Pollock's Brook	Stringers	do	62	16	1866	130 00	
Rivière aux Perches	King Post	do	62	16	1857	656 00	
Rivière aux Bouleaux.	do	do	45	16	1856	160 00	
do do	Stringers	do	45	16	1856	160 00	
do do	do	do	75	16	1861	651 00	
Syriac's Brook	King Post	do	150	16	1861	1,298 00	
do	do	do	145	16	1861	1,292 00	
Grande Bergeronne	......	do	......	......	......	......	
Malbaie	King Post	do	180	12	1856	200 00	Rough work.
Cap Rouge	Fleming's Truss.	do	420	18	1841	2,357 15	This Bridge was constructed by the Board of Works of Lower Canada, and given over to the Quebec Turnpike Trust Commissioners.—Its cost was about $2,357.15.
Jacques Cartier	Mills' Arch and Truss Bents.	do	373	24	1848	15,596 37	
Champlain	......	do	......	......	......	2,004 90	
Ste. Anne	Arch and Truss	do	1,315	N. 12 S. 18½	1844	27,550 20	
......	......	......	......	......	......	$153,491 69	

APPENDIX

TABULAR STATEMENT of Bridges in Canada, shewing the Dimensions, Cost, &c., the Department

Number of Bridge.	NAME OF BRIDGE.	IN WHAT				ON WHAT ROAD.	
		District.	County.	Township.	Seigniory.	Main or Branch.	Name of Road.
	EASTERN CANADA, ABOVE QUEBEC.—*Continued.*						
	Brought forward.......	....	....	....	....	....	....
114	Batiscan.................... ...	Three Rivers.	Champlain.	None........	Batiscan ...	Main Road.	Quebec & Montreal, along North Shore of St. Lawrence.
115 116	} St. Maurice, (2 bridges)..	do ...	St. Maurice.	do	Ste. Marguerite.	do ..	do do
117	Berthier or Bayonne........	Montr'al	Berthier.	None.......	Berthier....	Main..	Along North Shore of St. Lawrence.
118	River Delisle......................	do ...	Soulanges.	do	Soulanges..	do ...	Montreal and Province Line, North side of St. Lawrence.
119	River Beaudet	do ...	do ...	do	do ...	do ...	do do
120	Chaudière........................	Quebec ..	Levis	do	Lauzon	Br'nch	Quebec & Montreal, along South side of St. Lawrence.
121	Etchemin........................	do ...	do ...	do	do	do ...	do do
122	Rivière du Chêne...	do ...	Lotbinière.	do	Lotbinière.	do ...	do do
123	Bécancour	Three Rivers.	Nicolet..	do	Bécancour.	do ...	do do
124	Godfroi	do ...	do ...	do	Rouville ...	do ...	do do
125	Nicolet	do ...	do ...	do	Nicolet	do ...	do do
226	Châteaugay	Beauharnois.	Huntingdon.	do	Châteauguay.	do ...	do do
127	Melbourne	St. Francis.	Richm'd	Melbourne	None..	do ...	Arthabaska, on South side of St. Lawrence.
128	Memphremagog	do ...	Stanstead.	Hatley......	do	do ...	Main Eastern Township, on South side of St. Lawrence.
129	Rock Island	do ...	do ...	Stanstead..	do	do ...	Burrough's Place to Province Line, on South side of St. Lawrence.
130	North Nation...................	Ottawa...	Ottawa...	None	Petite Nation.	Main..	North shore of Ottawa River.
131	Farmer's Rapids..............	do ...	do ...	Hull.........	None	do ..	Along North shore of River Ottawa, about 3 miles from the mouth of the River Gatineau.
	Carried forward.......	....	....	....	....	....	....

No. 20.—*Continued.*

of these Works, constructed, in progress of construction, improved or repaired by of Public Works.

Over what River.	Kind of Truss.	Roofed or not roofed.	DIMENSIONS IN FEET.		Year of Completion.	Cost of Construction, since the Union.	REMARKS.
			Length.	Breadth.			
			ft.	ft.		$ cts.	
....	....	....	....	... .	......	153,491 69	
Batiscan	Howe's	Roofed......	1,240	18 6	1844	31,536 80	Swing Bridge, 12 feet.
St. Maurice..........	Arch and Truss.	Not roofed.	2,136	East Bridge 18 6 West Bridge 20.	1844	68,408 00	
Bayonne...............	Arch and Truss	Not roofed.	110	18	1843	5,109 60	
Delisle	Queen Post.....	do ...	104	14	1844	1,643 47	
Beaudet	do ...	do ...	95	18	1843	1,062 28	Included in Cascades Road.
Chaudière	Arch and Truss	do ...	660	....	1831 and 1843	4,738 92	
Etchemin	do ...	do ...	248	18	1847	7,083 83	
Du Chêne.....	Queen Truss	do ...	336	16	1847	6,579 75	
Bécancour	do ...	do ...	620	16	1847	7,530 56	
Godfroi................	Bents Stringers, King Post.	do ...	1338	18	1848	7,276 18	
Nicolet	Burr's Arch and Truss.	do ...	811	18	1848	17,920 08	
Châteauguay	Howe's...........	Roofed	190	18	1846	7,613 28	
St. Francis............	Burr's Arch and Truss.	do	730	18	1848	19,369 67	
Outlet of Lake Memphremagog.	Bents, String'rs 40 feet Truss.	Not roofed.	212	18	1841	1,040 00	Paid by Lower Canada.
....	Paddleford's Arch and Suspension Rod.	....	170	18	1847	3,513 23	
North Nation.........	Queen Truss.....	....	413	18	1866	1,761 33	Length. Width.
Gatineau................	Howe's Truss and Arch, Stringers and Piers.	Not roofed.	841	18	1866	7,679 14	The Bridge at Farmer's Rapids comprises three main spans with Howe's Trusses & Arches. 497x18 A Northern Approach.—Stringers on Piers..............113x18 A Southern Approach.—Stringers on Piers............. 231x18
....	....	....	....	....	......	$353,357 81	Total Length..... 841

APPENDIX

TABULAR STATEMENT of Bridges in Canada, shewing the Dimensions, Cost, &c., the Department

Number of Bridge.	NAME OF BRIDGE.	IN WHAT		ON WHAT ROAD.		Over what River.
		County.	Township.	Main or Branch	Name of Road.	
	WESTERN CANADA. *Below Kingston.*					
	Brought forward	....	....	....	.. ..	....
132	Beginning at City of Ottawa, 1st Bridge.	Carleton	City of Ottawa.	Main.....	Ottawa and Hull, or between Eastern and Western Canada..............	Ottawa.......... ......
133	Thence 2nd "	do ...	do ...	do ...	do	do ....
134	Thence the Suspension Bridge, 3rd Bridge.	do ...	do ...	do ...	do	do ....
135	Ending at Village of Hull, 4th Bridge.	Ottawa...	Hull.........	do ...	do	do ....
136	Side Bridge to Victoria Island.	Carleton	City of Ottawa.	Side......	do	do ....
137	Side Bridge to Albert Island.	do ...	do ...	do ...	do	do ....
138	Pooley's Bridge..............	do ...	do ...	Street, City of Ottawa.	do	Ravine......... .....
139	Mutchmor's Cut..............	do ...	Nepean.. ...	Main	Ottawa and Gloucester Road.	Rideau Canal.......
140	Beckett's Landing..	Carleton & Grenville.	Marlboro'h Oxford.	Branch...	Road allowance between Lots 24 & 25 Township of Oxford, Co. of Grenville, and Lot 5 Township of Marlboro', Co. Carleton.	Rideau River........
141	Winchester.....................	Dundas..	Winchester	do ...	St. Lawrence and Ottawa.	South Nation.........
142	Rivière aux Atocas	Prescott.	Alfred	do ...	L'Orignal and Ottawa.....	Atocas.................
143	Hattfield.........................	do ...	Plantagenet.	do ...	do	South Nation.........
144	Rideau.........	Carleton	Nepean.....	do ...	do	Rideau........... ......
145	Bonnechère	Renfrew	Horton.. ...	Main.. ...	Ottawa and Pembroke....	Bonnechère............
146	Madawaska, at Village of Arnprior.	do ...	McNab. ...	do ...	do	Madawaska.. ....
147	Gananoqui	Leeds ...	Leeds........	do ...	Montreal and Kingston...	Gananoqui...... ......
	BETWEEN KINGSTON AND TORONTO.					
148	Shannonville...................	Hastings	Tyendinaga.	do ...	Kington and Toronto......	Salmon......... ....
149	Belleville........	do ...	Thurlow ...	do ...	do	Moira......... ....
150	Trenton.........	Northumberland.	Murray.....	do ...	do	Trent.....................
151	Rouge Hill......................	Ontario..	Pickering..	do ...	do	Rouge ....
152	Don......	York......	York..	do ...	do	Don ....
153	Seymour or Campbellford..	Northumberland.	Seymour...	Branch..	Percy	Trent.....................
154	Ranney's Falls...............	do ...	do ...	do ...	Campbellford to Crook's Rapids.	do ....
	Carried forward	....	....	....	....	....

No. 20.—*Continued.*

of these Works, constructed, in progress of construction, improved or repaired by
of Public Works.

Kind of Truss.	Roofed or not roofed.	Dimensions in feet. Length.	Breadth.	Year of Completion.	Cost of Construction, since the Union.	REMARKS.
		ft.	ft.		$ cts.	
....	....	....	....	....	$ 353,357 81	
Queen Truss....	Not roofed.	94	18	1843	66,448 78	*Ottawa Bridges.*—The wood-work of the bridges built in 1843-44 has been renewed since the time of their construction. A sum of $3,285.50 was expended in 1853 on the bridge over the Buchanan channel and on the side bridge leading to Victoria Island. Out of the 1,148½ feet between the Suspension Bridge and Hull, there are 518 feet over three stone arches, 538½ feet across rock and 91¾ feet over a bridge on bents. The beams of the Suspension Bridge were formerly of wood, they were replaced by iron beams which support the wooden stringers beneath the planking of the roadway, in 1861; this work and the reconstruction of the woodwork amounted, on 1st July, 1867, to $5,266 70.
do ...	do ...	384	25	1843		
Suspension Bridge.	do ...	256	23½	1844		
Stone Arches and Bents.	do ...	1,148½	....	1844		
Stringers on Bents.	do ...	33	....	1853	3,285 50	
do ...	do ...	66	....	1857	434 72	
do ...	do ...	143	24	1857	817 00	
Wooden Swing	do ...	440	13	1866	4,250 00	The bridge at Mutchmor's Cut consists of a wooden swing bridge of 40 feet span, the rest being embankment and the whole being about 440 feet long; average height of embankment, 15 feet.
....	do ...	340	18	1867	7,000 00	The bridge at Beckett's Landing is a timber bridge consisting of 5 spans of 40 feet each, and a swing of 40 feet, the whole length being 335 feet exclusive of earth approaches; average height of piers, 22 feet.
King Post and Stringers.	do ...	182	15	1848	1,200 00	
King Post and Bents.	do ...	170	....	1848	500 00	Cost of bridge included in Ottawa Works.
Queen and King Post.	do ...	267	16	1848	do 3,000 00	do do do do do
Stringers..	do ...	243	18	1846	1,200 00	do do do in Ottawa & L'Orignal. Road.
Queen Post and Stringers.. ...	do ...	179	......	1848	1,200 00	do do do in Ottawa Works.
Burr Truss......	do ...	182	16	1848	4,000 00	do do do in do
Arch and Truss	do ...	296	18	....	4,020 52	
Queen Post......	do ...	108	....	1848	1,136 00	
Howe's	do ...	260	20	1846	5,820 62	
Arch and Truss	Roofed.. ...	570	....	....	Paid out of tolls.	
Howe's..	Not roofed.	266	20	1847	6,228 00	
Arch and Queen Post.	Roofed.. ...	106	18	....	Paid out of tolls.	$4,733.93 were granted for this bridge in March, 1830.
Queen Post......	Not roofed.	348	18	....	5,469 48	The cost of these bridges is included in that of the Trent Works, at pages 156, 157, of Appendix No. 17.
Stringers	do ...	169	....	1844	Included in Slide.	
....	....	....	....	....	469,368 43	

APPENDIX

Tabular Statement of Bridges in Canada, shewing the Dimensions, Cost, &c., of the Department

No. of Bridge.	NAME OF BRIDGE.	In what		On what Road.		Over what River.
		County.	Township.	Main or Branch.	Name of Road.	
	Western Canada.—*Con.* *Between Kingston and Toronto.*—Continued.					
	Brought forward					
155	Crook's Rapids	do	Percy	Northumberland.	At Village of Hastings, Crook's Rapids.	Trent
156	Whitlas do	Peterboro.	Monaghan	do	Near Town of Peterboro'..	Otonabee
157	Peterborough	do	do	do	At Town of Peterboro'...	do
158	Indian River	do	Douro	do	Peterborough and Norwood.	Indian
159	Buckhorn Rapids	do	Harvey	do	On main road from Peterborough.	Buckhorn Narrows..
160	Bobcaygean	Victoria.	Verulam	do	Leading to Bobcaygean Lock.	Sturgeon
161	Lindsay, Scugog Rapids..	do	Ops		Across slide, Town of Lindsay.	Scugog
162	Do Reconstructed ..	do	do		do do	do
	Above Toronto.					
163	Humber.	York..	York	Main	Toronto and Dundas	Humber
164	Narrows	Simcoe ..	Orillia	Branch ..	Coldwater Portage	Lake Simcoe
165	Nottawasaga Bridge&Hills	do	Sunnidale..	Branch ..	Nottawasaga	Nottawasaga
166	Caledonia	Haldimand.	Seneca	do	Hamilton and Port Dover	Grand River
167	Dunnville dam	do	Moulton	do	Port Dover and Dunnville	do
168	{ Do	do	do		do do	do
	{ Do	do	Dam		do do	Sulphur Creek
169	Brantford	Brant	Brantford..	Main	Hamilton and London...	Grand River
170	Paris	do	Dumfries ..	Branch ..	Dundas Street	do
171	London	Middlesex.	London	Main	London and Port Sarnia..	Thames
172	Westminster	do	Westminster.	do	London and Chatham	do
173	Delaware	do	Delaware ..	do	do do	do
174	Chatham	Kent..	Chatham	do	do do	do
175	Port Stanley ..	Elgin	Yarmouth..	Branch ..	Port Stanley and London.	Kettle Creek
	Total					

General Remark on Bridges.—The preceding statement shewing the bridges constructed under
for 1848), prepared by James Stewart, C.E., and myself, and on other official documents of a more

A great number of the small bridges on a few of the roads in Lower Canada, and on most of the
ascertained with any degree of accuracy.

The cost of construction given is that only which was incurred under the Department. up to the

Most of the bridges have been rebuilt or repaired since the time of their completion, chiefly at the
the expense of the Government.

A list of bridges transferred, leased, sold or abandoned by the Government, will be found in

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The total expenditure, before and since the Union, (10th Feb., 1841,) up to 1st July, 1867, from
ceding statement is as follows, viz :—

Total Expenditure on Bridges, excepting $91,095.72, included in cost of roads, App. No. 19—$20,881.20 included in cost of Trent Works, and $8,700 included in cost of Ottawa Works, App. No. 17, pages 156, 157, —in all $120,676.92, since the Union, up to 1st July, 1867

Ottawa, 23rd November, 1867.

No. 20.—*Continued.*

these Works, constructed, in progress of construction, improved or repaired by of Public Works.

Kind of Truss.	Roofed or not roofed.	Dimensions in feet. Length.	Dimensions in feet. Breadth.	Year of Completion.	Cost of Construction, since the Union.	REMARKS.
		ft.	ft.		$ cts.	
....	....	....	....	....	$469,368 43	
Queen Post.....	Not roofed.	485	18	1845	2,918 33	The cost of these bridges is included in that of the Trent Works, at pages 156, 157 of Appendix No. 17.
King Post	do ...	272	18	....	....	
Howe's Truss...	do ...	264	18	1847	7,953 15	
Queen Post.....	do ...	180	....	1848	1,200 00	
King Post......	do ...	600	....	1845	2,025 16	
do	do ...	162	....	1845	1,315 08	
Queen Post......	do ...	74	....	1844	Included in [Lock.	
do	do ...	172	18	1864	4,929 48	
do	do ...	118	30	1848	4,012 00	Includes a culvert for a Mill Race.
Howe's& Com'n	do ...	635	18	....	6,382 85	
....	Not roofed	162½	16	1849	4,000 00	This was the amount appropriated.
Arch and Truss	do ...	638	16	1843	11,923 00	The Caledonia Bridge was rebuilt in 1865 by the lessees of the road.
....	do ...	586½ Reb'lt	....	....	Paid out of Tolls.	
....	do ...	564	17½	1856	7,500 00	
....	do ...	209	16	1856		
Queen Post	do ...	208	....	1849	10,000 00	
Lattice	do ...	260	....	1846	2,400 00	£1,500 granted by Parliament of Upper Canada.
Howe's	do ...	212	....	1843	5,925 13	
King & Queen Posts.	do ...	172	....	1838	1,000 00	Built at the expense of the district, and afterwards repaired by Government.
Howe's & Common.	do ...	850	17½ to 20	1843	6,806 97	Included in cost of road.
Howe's	do ...	223	....	1849	9,065 50	
do	do ...	200	12	1843	1,560 00	Included in cost of road.
....	....	....	....	....	$560,285 08	

the Department of Public Works, or otherwise, is based on Appendix N, (Com. of P. Works Report recent date.

roads in Upper Canada, has been omitted intentionally, because the cost of the same could not be

time each bridge was completed, unless otherwise stated in the notes of reference.

expense of the municipalities to whom they have been abandoned or transferred, and in other cases at

Appendix No. 23, page 312 to 323.

the Funds of the Provincial Government, for the construction of the Bridges enumerated in the pre-

Before the Union, as far as ascertained.	Since the Union, under the Department of Public Works.	Total Cost of Construction.
Amount for which Debentures were issued. $50,000 00	$439,608 16	$489,608 16

G. F. BAILLAIRGÉ, C.E.

APPENDIX No. 20½.

No. 1.—Quebec to Gaspe Basin, *viâ* Provincial Highway, along South Shore of the St. Lawrence to St. Flavie; thence by Métapédiac Road; thence by the present Highway along the North side of the Baie des Chaleurs.

FROM	TO	Intermediate Mileage.	Total Mileage from Quebec.	REMARKS.
Quebec	Rivière du Loup	114	114	128 per Grand Trunk Railway. Government Wharf about 1½ miles from Village.
Rivière du Loup	Rimouski	66	180	Government Wharf about 1 mile from Village.
Rimouski	St. Flavie	21	201	North end Métapédiac Road, on St. Lawrence, at 5 miles from North end of Kempt Road.
St. Flavie	Mouth of the River Métapédiac	93¾	294¾	At Junction of River Ristigouche.
Mouth of River Métapédiac	James Sillars	5	299¾	South end Métapédiac Road, on Ristigouche.
James Sillars	South end of Kempt River	3	302¾	On the River Ristigouche.
South end of Kempt Road	Opposite Campbellton	4¼	307	do do
Opposite Campbellton	River Nouvelle	18	325	Along Bay of Ristigouche.
River Nouvelle	Carlton	10	335	do Baie des Chaleurs.
Carlton	Great Cascapédiac River	13½	348½	do do
Great Cascapédiac River	Great Bonaventure do	22½	371	do do
Great Bonavsnture do	New Carlisle	8½	379½	Chef-Lieu Co., of Bonaventure, along Baie des Chaleurs.
New Carlisle	Pasbébiac	3	382½	Along Baie des Chaleurs.
Pasbébiac	Nouvelle, Township of Hope	5½	388	do do
Nouvelle	West Point of Port Daniel	9	397	do do
West end of Port Daniel	Pabos, Village	21¾	418¾	do do
Pabos	Grand River	7¾	426½	do do
Grand River	Junction of Road, 1½ miles above Percé	15½	442	do do
Junction of Road 1½ miles above Percé	Malbie, at outlet of Barachois	8½	450½	do do
Malbaie	Belle Anse	2¼	452¾	At road intersection, 2¼ miles above Point Peter, between Baie des Chaleurs and Gaspé Bay.
Belle Anse	Douglas Town	11¾	464½	Along Gaspé Bay.
Douglastown	Gaspé Basin	6¼	470¾	Fort Ramsay.

G. F. B.

APPENDIX No. 20½.—*Continued.*

No. 2.—QUEBEC TO GASPE BASIN, *viâ* Provincial Highway, along South Shore of St. Lawrence, to Ste. Anne des Monts, thence by proposed Road to Great Fox River, thence by the New Road to Griffin's Cove and Peninsula and the Ferry across Gaspé Bay.

FROM	TO	Intermediate Mileage.	Total Mileage from Quebec.	REMARKS.
Quebec	Rivière du Loup	114	114	128 miles from Railway, Government Wharf, about 1½ miles from Village.
Rivière du Loup	Rimouski	66	180	Government Wharf, about 1 mile from Village.
Rimouski	Ste. Flavie	21	201	North end of Métapédiac Road.
Ste. Flavie	Métis	5	206	North end of Kempt Road.
Métis	Matane	35½	239½	
Matane	St. Denis	9	248½	West end of New Road.
St. Denis	Cap de Chatte	36	284½	East do do
Cap de Chatte	Latourelle	13¼	297¾	West do proposed road.
Latourelle	Great Magdalen River	64¼	362	Viâ proposed road.
Great Magdalen River	Great Fox River	50¾	412¾	do do
Great Fox River	Griffin's Cove	6	418¾	New Government Road.
Griffin's Cove	Peninsula	7	425¾	do do
Peninsula	Gaspé Basin	3¼	429	Ferry across Gaspé Bay.

N.B.—The mileage of the various places along the Provincial Highways, as above, is that which is generally charged to Travellers. The above Route is 41¾ miles shorter than the Route by the Métapédiac and Baie des Chaleurs.

G. F. B.

APPENDIX No. 20½.—*Continued.*

No. 3.—QUEBEC TO HALIFAX, *viâ* Métapédiac Road.

NAMES OF PLACES.	Intermediate Mileage.	TOTAL MILEAGE FROM		REMARKS.
		Quebec.	Halifax.	
CANADA—				
Quebec	0	0	701	Mail Route.
Rivière du Loup	128	128	573	Grand Trunk Railway 14 miles longer than Road along South shore of St. Lawrence.
Rimouski	66	194	507	On do do
Ste. Flavie	21	215	486	Northern end Métapédiac Road, on do
Mouth of Métapédiac River	94½	309½	391½	At confluence of Ristigouche River.
Cross Point, South end Métapédiac Road	15½	325	376	At head of Baie des Chaleurs.
NEW BRUNSWICK—				Riv. Ristigouche, Boundary between Canada and N. B.
Campbellton	1	326	375	Ferry from Cross Point across mouth Ristigouche.
Dalhousie	16	342	359	On Baie des Chaleurs.
Belle Dune	31	373	328	do do
Bathurst	23	396	305	do do
Chatham	46	442	259	Miramichi Bay, Gulf St. Lawrence.
Richibucto	40	482	219	E. entrance Northumberland Strait, Gulf St. Lawrence.
Shédiac	36	518	183	On do do
Bend of Petitcodiac	15	533	168	On River emptying into Bay of Fundy.
NOVA SCOTIA—				
Amherst	44	577	124	Head of Bay of Fundy, N.W. arm of Cumberland Basin.
Truro	63	640	61	Head of Coboquid Bay, Bay of Fundy, S.E. arm.
Halifax	61	701	0	Railway ending on Atlantic Ocean.

REMARK.—From Campbellton to the River St. John near the mouth of the Tobique River, 132 miles. The mouth of the Tobique River is 11 miles above Rivière de la Chute and 27 miles below Grand Falls.

From Halifax to Liverpool, *viâ* Cape Clear, 2,530 geographical—2,910 statute miles. (See page 199 of Appendix.)

G. F. B.

APPENDIX No. 20½.—*Continued.*

No. 4.—Quebec to Halifax, *viâ* Témiscouata Road, Woodstock, Fredericton, St. John and Amherst.

NAMES OF PLACES.	Intermediate Mileage.	Total Mileage From		REMARKS.
		Quebec.	Halifax.	
Canada—				
Quebec	0	0	705	Grand Trunk Railway.
Rivière du Loup	128	128	577	
Province Line	67	195	510	Temiscouata Road.
New Brunswick—				
Little Falls (Edmunstone)	12	207	498	Near confluence Rivers Madawaska & St. John.
Grand Falls	38	245	460	On East side of River St. John.
Rivière de la Chute	33	278	427	On West do do
Woodstock	40	318	387	do do do
Fredericton	63	381	324	do do do
St. John	66	447	258	Bay of Fundy Railway, 106 miles long. St. John to Shédiac.
Petitcodiac, on Shédiac Railway	90	537	168	
Nova Scotia—				
Amherst	44	581	124	Head N. W. arm, or Cumberland Basin, Bay of Fundy.
Truro	63	644	61	Head S.E. arm, or Coboquid Bay, Bay of Fundy.
Halifax	61	705	0	Railway from Bay of Fundy to Ocean.

N.B.—River St. John, from Little Falls to Grand Falls, forms the boundary between Maine and New Brunswick.

No. 5.—Quebec to Halifax, *viâ* Témiscouata Road, Woodstock, St. Andrew's, St. John and Windsor, crossing the Bay of Fundy.

Canada—				
Quebec	0	0	634	
Province Line	195	195	439	
New Brunswick—				
Woodstock	123	318	316	Railway ends on N. side Bay of Fundy.
St. Andrew's	88	406	228	
St. John	63	469	165	On North side do
Nova Scotia—				
Windsor	120	589	45	Up Bay of Fundy by Steamboat.
Halifax	45	634	0	Railway from Bay of Fundy to Ocean.

No. 6.—Quebec to Halifax, *viâ* Témiscouata Road, Woodstock, Fredericton, St. John and Annapolis, crossing the Bay of Fundy.

Canada—				
Quebec	0	0	632	
New Brunswick—				
Fredericton	381	381	251	
St. John	66	447	185	North side Bay of Fundy.
Nova Scotia—				
Annapolis	59	506	126	South side do
Windsor	81	587	45	do do
Halifax	45	632	0	Railway from do to Ocean.

APPENDIX No. 20½.—*Continued.*

No. 7.—QUEBEC TO ST. ANDREWS, Bay of Fundy, New Brunswick, *viâ* Temiscouata Road, Grand Falls and Woodstock.

NAMES OF PLACES.	Intermediate Mileage.	Total Mileage.	REMARKS.
Quebec to Rivière du Loup, per Grand Trunk Railway	128	128	128 miles of railway across a well settled country—Cars run every day.
Rivière du Loup, per Témiscouata Road, to boundary line between Canada and New Brunswick	67	195	¾ of the Témiscouata Road may be considered either level or undulating, ¼ is hilly, but the grades do not exceed 1 in 10 to 1 in 12; Road traverses a thinly settled country.
Provincial boundary line to Edmunstone or Little Falls, on the River St. John, near boundary, State of Maine	12	207	Good level road along the River Madawaska, through a thinly settled country, inhabited by Acadians on both sides.
Little Falls to Grand Falls, on east side of River St. John	38	245	From Little Falls to Grand Falls the River St. John forms the boundary between the State of Maine and New Brunswick. Both sides of river are thickly settled by Acadians.
Grand Falls to Rivière de la Chute, on west of River St. John	33	278	Well settled; road being at from 3 to 5 miles from American Frontier.
Rivière de la Chute to Woodstock, on west side of River St. John	40	318	Rivière de la Chute is 3 miles from Frontier; the road passes through Florencevile at 15 miles, thence to Woodstock 25 miles. Woodstock is 11 miles from the Frontier.
Woodstock to Eel River, on west side of River St. John	13	331	At Woodstock, to which point the country is well settled all the way from Little Falls, the remainder of the distance to St. Andrew's can be travelled by railway.
Eel River to Oak Bay, on west side of River St. John	62	406	
Oak Bay to St. Andrews' Harbor, Bay of Fundy	13	419	
Quebec to St. Andrews, Bay of Fundy, *via* Témiscouata Road, Grand Falls and Woodstock	406		

This Route, for a considerable distance, especially the Road leading directly to St. Andrews, is within from 3 to 11 miles only from the American Frontier.

There is an American Fort, called Fairfield, at the intersection of two cross roads leading to Restook and Tobique, both on the River St. John, at 5¼ miles from the American Frontier. Tobique is 61 miles and Restook 55 miles below the Terminus of the Témiscouata Road, at the Provincial Boundary Line.

APPENDIX No. 20½.—*Continued.*

No. 8.—QUEBEC TO ST. JOHN, Bay of Fundy, New Brunswick, *viâ* Témiscouata Road, Grand Falls, Woodstock and Fredericton.

NAMES OF PLACES.	Intermediate mileage.	Total Mileage.	REMARKS.
Quebec to Rivière du Loup, per Grand Trunk Railway	128	128	For description of road, see *remarks* in table of distances between Quebec and St. Andrew's, at page 196.
Rivière du Loup, per Témiscouata Road, to boundary line between Canada and New Brunswick	67	195	
Provincial Boundary line to Edmunstone or Little Falls, on the river St. John, near boundary, State of Maine	12	207	
Little Falls to Grand Falls, on east side of River St. John	38	245	
Grand Falls to Rivière de la Chute on West side of River St. John	33	278	
Rivière de la Chute to Woodstock, do do	40	318	
Woodstock to Fredericton, on South side River St. John	63	381	
Fredericton to St. John.	66	447	Between Fredericton and St. John, the travelling in winter is said to be preferable on the Ice of the River St. John, the banks of which are thickly settled.
Quebec to St. John, Bay of Fundy, *via* Témiscouata Road, Woodstock and Fredericton	447		

From St. John, Halifax may be reached in from 2½ to 3 days, *viâ* Annapolis and Windsor, viz.: by Steam Ferry, in 4 hours, across the Bay of Fundy to Annapolis, thence in 2 days by stage to Windsor, thence by Railway in 2 or 3 hours more to Halifax. From St. John, Halifax may also be reached in about 13 hours, viz.: by Steamer to Windsor 120 miles up the Bay of Fundy in 10½ hours, and from Windsor to Halifax by Railway 45 miles in 2½ hours.

APPENDIX No. 20½.—*Continued.*

No. 9.—QUEBEC TO ST. JOHN, Bay of Fundy, New Brunswick, *via* Témiscouata Road, Grand Falls, Woodstock and St. Andrews.

NAMES OF PLACES.	Intermediate mileage.	Total mileage.	REMARKS.
Quebec to Riviére du Loup, per Grand Trunk Railway.	128	128	For description of road see *remarks* in table of distances between Quebec and St. Audrews, at page 196.
Rivière du Loup, per Témiscouata Road, to boundary line between Canada and New Brunswick	67	195	
Provincial boundary line to Edmunstone or Little Falls, on the River St. John, near boundary State of Maine...............................	12	207	
Little Falls to Grand Falls, on the East side of the River St. John	38	245	
Grand Falls to Rivière de la Chute, on West side of the River St. John..	33	278	
Rivière de la Chute, *viâ* Floreneeville to Woodstock, on West side of River St. John........................	40	318	
Woodstock to Eel River, on West side of River St. John	13	331	
Eel River to Oak Bay..	62	406	
Oak Bay to St. Andrew's Harbor, Bay of Fundy.....	13	419	
St. Andrew's to St. John do do	63	482	
Quebee to St. John, Bay of Fundy, *viâ* Témiseouata Road, Grand Falls, Wooodstock and St. Andrew's	469		

REMARKS ON ROADS AND HARBORS OF NEW BRUNSWICK AND NOVA SCOTIA.

By reference to the preceding tables of distances, Nos. 3, 4, 5, 6, 7, 8 and 9, it will be seen that the shortest route from Quebec to the seaboard is that by the Temiscouata Road to St. Andrews, on the Bay of Fundy ; the total distance being 406 miles.

The Harbors of St. Andrews and St. John are accessible at all times during Winter and Summer, for vessels of any tonnage. The Harbor of St. John, which is also on the Bay of Fundy, is well provided with deep water wharves, and is 63 miles eastward from that of St. Andrews. At this latter Port, where there are no deep water wharves, vessels have to lay from 1 to 1½ miles out from the shore, and passengers have to be landed at half-tide by lighters.

The Railway from St. Andrews is completed as far as the Woodstock Road, a distance of 88 miles. At 11 miles from St. Andrews, the Railway passes at 8 miles from the American Town of Calais and the British Town of St. Stephen. Vessels can run to Calais and St. Stephen at any time in Summer.

The most important cross-roads leading from the State of Maine into New Brunswick, are :—

1stly.—From Town of Holton to Woodstock .... 11 miles.
(Here the St. Andrew's Railway passes at 6 miles from the former and 5 miles from the latter).
2ndly.—From Town of Presqu'-Ile to Florenceville. { 26 miles above Woodstock.. / 47 miles below Grand Falls.. } 9 "
3rdly.—From Fort Fairfield to Tobique............. { 25 miles below Grand Falls.. / 48 miles above Woodstock.. } 5½ "
4thly.—From Fort Fairfield to mouth of Restook.... { 54 miles above Woodstock.. / 19 miles below Grand Falls... } 5½ "

On the River St. John, 20 miles above Little Falls, and at the mouth of Fish River, is Fort Kent, in the State of Maine.

APPENDIX No. 20½.—*Continued.*

No. 10.—DISTANCE TO LIVERPOOL, from Halifax (Nova Scotia), St. John (New Brunswick), Portland (State of Maine), Quebec (Canada), as measured on Colton's Map of 1861.

Halifax to Liverpool, *viâ* Cape Clear.

FROM	TO	Sections of Navigation:	DISTANCE IN MILES.	
			Geographical.	Statute.
Halifax, Nova Scotia	Cape Clear	Across Atlantic to S.W. end of Ireland	2,200	2,530
Cape Clear	Liverpool	Up St. George's Channel	330	380
		Total	2,530	2,910

St. John to Liverpool, *viâ* Cape Clear.

FROM	TO	Sections of Navigation:	Geographical.	Statute.
St. John, New Brunswick	Cape Sable	Across Bay of Fundy to S.W. end of Nova Scotia.	180	207
Cape Sable	Cape Clear	Across Atlantic to S.W. end of Ireland	2,310	2,656
Cape Clear	Liverpool	Up St. George's Channel	330	380
		Total	2,820	3,243

Portland to Liverpool, *viâ* Cape Sable and Cape Clear.

FROM	TO	Sections of Navigation:	Geographical.	Statute.
Portland, State of Maine	Cape Sable	Across Bay of Fundy to S.W. end of Nova Scotia.	210	242
Cape Sable	Cape Clear	Across Atlantic to S.W. end of Ireland	2,310	2,656
Cape Clear	Liverpool	Up St. George's Channel	330	380
		Total	2,850	3,278

Quebec to Liverpool, *viâ* Cape Race, and North of Ireland.

FROM	TO	Sections of Navigation:	Geographical.	Statute.
Quebec	Cape Race	River and Gulf of St. Lawrence to S.W. Point of Newfoundland.	827	951
Cape Race	Malin Head	Across Atlantic to North end of Ireland	1,800	2,070
Malin Head	Liverpool	Down North Channel	192	221
		Total	2,819	3,242
Quebec to Liverpool *viâ* Straits of Belle-Ile and Malin Head, North of Ireland			2,661	3,060

For further details, see pages 9 and 10 of Appendix.

APPENDIX No. 20½.—*Concluded.*

A TABULAR VIEW of the River St. John, from Fredericton to the Great Falls, from a Report, dated St. John, N. B., August 21, 1826, on a Survey of the River St. John, from Fredericton to the Grand Falls, by Robert Foulis, C.E. and D.P.S.

DISTANCES OF PLACES.	Miles.	Chains.	Links.	Ascent from Level in inches.	No, of Rapids.	Velocity of current in Rapids, per 66 feet.	Medium Velocity of current, per 66 feet.	Depth of Channel.	GEOLOGICAL.
							"	ft. in. ft.	
From Fredericton to confluence of Tide below Chapel Bar........	4	77	59	......	.....	....	72	From 6 0 to 11..................	Sand, gravel, appearance of freestone, accidental blocks of granite.
From confluence of tide to French Chapel	5	15	......	43	2	22″	58	do 1 9 to 8..................	Gneiss-clay, slate, roofing slate.
Do French Chapel to Cliff's Bar........	7	52	......	129	3	28	1.26	do 2 9 to 10..................	do gravel, clay.
Do Cliff's Bar to head of Bear Island Bar	5	70	40	227	2	....	....	At Bear Island from 1.9 to 7½.	do red granite.
From Bear Island to Mackawickak.......	8	54	...		4	30	46	From 2 6 to 9..................	Variety granite.
Do Mackawickak to Meductic..........	4	68	50	56	2	Meductic Rapids, 12	60	do 5 0 to 10..................	Large grained granite veined with quartz.
Do Meductic to Eel River................	9	25	......	220	3	30	48	do 2 9 to 8	Graphite and porphyritic granite.
Do Eel River to Griffith's Island......	9	43	...	168	4	....	55	do 2 0 to 7..................	Volcanic stones, detached.
Do Griffith's Island to McMullan's ...	12	26	...	144	4	28	50	do 1 9 to 6½..........	do cellular.
Do McMullan's to Presqu'Ile	8	8	...		3	....	....	do 3 0 to 8..................	Gneiss-trap.
Do Presqu 'Ile to Rivière de la Chuto.	14	77	...	375	7	24	45	do 3 0 to 7........	Limestone, slate.
Do Rivière de la Chute to Tobique...	12	71	...	765	3	....	....	do 2 6 to 9..................	Trap.
Do Tobique to Great Falls..............	21	12	......		8	15	42	do 2 0 to 33..................	Transition limestone.
Total Distance................	125	39	47	2127	45	Total Length 10½ miles			

Perpendicular height of Great Falls..................................	74 feet.	Depth of water in Upper Basin..	20 feet.
Descent through Rocky Chasm................	45 feet 6 inches.	do do Lower do	33 feet.
Total descent of Falls................	119 feet 6 inches.	Length of cut necessary for Tunnel from Upper to Lower Basin..	836 yards.
Height of Hill at Portage, from level of Upper Basin......................	120 feet 7 inches.		
Do do Lower do	240 feet 1 inch.		

APPENDIX No. 21.

REPORT ON THE PUBLIC BUILDINGS AT OTTAWA.

BY JOHN PAGE, CHIEF ENGINEER.

Public Buildings, Ottawa,
29th August, 1867.

F. **Braun**, Esquire, Sec'y Dept. Public Works, Ottawa.

Sir,—Agreeably to instructions conveyed in your letter of the 3rd July last, and its enclosures; I have the honor to submit the following General Report on the Public Buildings at Ottawa; but before attempting to describe the Structures themselves, it is deemed proper to give, as requested, a "brief notice of the principal events connected with their construction."

The first direct action which appears to have been taken towards fixing on a place for the permanent Seat of Government, was on the 24th March, 1857, when resolutions were passed by the House of Assembly to the following effect:—

That the sum of two hundred and twenty-five thousand pounds be appropriated for the purpose of providing for the necessary Buildings; and that an Address be presented to Her Majesty, praying Her to select "some one place as the permanent Seat of Government in Canada."

A despatch from the Colonial Secretary, dated 31st December, 1867, conveying Her Majesty's selection of Ottawa as the Seat of Government, was communicated to both branches of the Legislature, on the 16th March, 1858.

The place having been thus chosen, and the site of the Buildings fixed upon, the Department of Public Works issued a notice, dated 17th May, 1859, inviting architects to prepare and submit designs for Parliament Buildings, and for the Public Departments, by the 1st day of August following, and stating that the Structures "are proposed to be built in a plain substantial style of architecture, of coursed hammer-dressed masonry, &c."

"All information as to the sites of the Buildings, their size, number of rooms, &c., necessary for the preparation of the plans, can be obtained at the office of the Department."

This notice resulted in sixteen designs for Parliament Buildings being submitted, by fourteen different competitors; and seven designs for Departmental Buildings by six different competitors; the whole of which were exhibited, and afterwards examined by gentlemen deemed competent to judge of their comparative merits.

The first premium for the Parliament Buildings was awarded to Messrs. Fuller & Jones, and that for the Departmental Buildings, to Messrs. Stent & Laver.

These gentlemen were subsequently instructed by the Department to make certain alterations in their plans, with a view to their better adaptation to the purposes contemplated; they were also requested to have these changes made, and specifications of the works prepared, by the 15th of October following.

On the 8th of September, public notice was given, that tenders for the construction of the Buildings would be received until the 1st day of November, and that the plans and specifications could be seen at Quebec, Ottawa, and Toronto, on and after the 15th October. The time, however, was extended to the 15th November, when twenty-one tenders were received for the Parliament Buildings, and twenty-nine for the Departmental Buildings.

The tender of Thomas McGreevy was accepted, for the bulk sum of $348,500 for the construction of the Parliament Buildings; and a contract was entered into with him on the 7th December, 1859, for their completion by the 1st day of July, 1862.

About the same time the construction of the Departmental Buildings was awarded to Messrs. Jones, Haycock, & Clarke, at the bulk sum of $278,810, and the time fixed by the contract for their completion, was the 1st Feburary, 1862.

The architects who received the first premiums were, on the 29th November, 1859, appointed to superintend the execution of the works connected with the respective buildings, at a commission of about five per cent. upon the contract sum.

No adequate provision having been made for heating and ventilation in the accepted plans, a notice was issued on the 14th November, 1859, calling upon competent parties willing to undertake this service, to tender for its performance, on or before the 30th December, and to submit the details of the system which they proposed to adopt, as also to guarantee its efficient working, for a period of ten years after completion.

In accordance with this notice nine tenders were received, and on the 28th January, 1860, the work was awarded to Charles Garth, at the bulk sum of $61,285. This was understood to include the furnishing and fitting up of the whole of the apparatus necessary for the heating and ventilation of all the Buildings, except certain alterations as to the mode of warming the wings of the Parliament Buildings.

The building contractors commenced operations on the 20th December, and were principally occupied, during the winter of 1859–60, in the excavation of foundations, preparing materials, and making arrangements for carrying on the works in the ensuing spring.

The masonry was commenced on the Parliament Buildings on the 26th April, 1860, and in June the foundations of the main central tower were laid. On the Eastern Block for the Departments building operations began on the 2nd April, and the works were then generally proceeded with.

On Saturday, the 1st September, 1860, H.R.H. the Prince of Wales laid the corner-stone of the pier immediately under the north-east angle pillar of the Legislative Council Chamber; and in the early part of December building operations were generally stopped for the season.

About this time it became necessary to obtain more ample information in regard to the expenditure on, and management of, the works, than was in the possession of the Department. With this object in view, an Order in Council was passed on the 18th December, 1860, authorizing the Chief Engineer to be sent to Ottawa, for the purpose of reporting fully on all matters connected with the general character, superintendence, and progress of the works, &c., &c., from the commencement up to that period.

A detailed report was submitted by that officer on the 20th April, 1861, recommending certain changes to be made, by which the works could be resumed under a different system of management and supervision.

During the season of 1861 they were continued agreeably to the suggestions contained in the report above referred to, until the 1st of October, when, the appropriation having been exhausted, they were suspended by order of the Hon. the Commissioner.

The Hon. H. H. Killaly was, on the 21st September, 1861, instructed to proceed to Ottawa and ascertain what arrangements could be made to protect the Buildings during the ensuing winter, and to report generally upon their condition and the best mode of settling with the contractors for works which had been performed, &c.

That gentleman accordingly submitted a report, dated 12th November, 1861, embodying his views upon these matters, and accompanied by a progress estimate, shewing, in detail, the amount which he considered should be paid to the contractors for the various items of work, &c., done by them up to the 1st October, 1861, at rates and prices fixed by him. On the 11th and 12th March, 1862, he sent estimates of the work done during the months of October and November, 1861; and on the 16th April, 1862, another Report was furnished by him, which contained a summary of his previous estimates, together with an estimate of the probable cost of completing the Buildings.

In 1862, the sum of $188,344.30 was appropriated, under the head of "unprovided items," for the previous year, and a further sum of $500,000 was granted by the Legislature towards the construction of the Buildings.

The contractors urging a settlement for the works they had performed, and alleging certain claims for their suspension, a Commission was appointed, under the Great Seal of the Province, on the 21st June, 1862, to enquire into all matters connected with the construction of the Buildings and management of the works, so far as they had then been proceeded with, and to advise the Government as to the best method of carrying them on in future; and also to supply an estimate of the probable cost of their completion.

The gentlemen forming this Commission had a re-measurement made of the whole of the works, and examined a large number of witnesses as to their past management, value of labor and materials, and other matters connected with the subject.

At this time there had been paid to Mr. Thomas McGreevy, for work performed, the sum of $483,163.95, and to Messrs. Jones, Haycock & Co., the sum of $511,391.54.

On the 29th January, 1863, the Report of the Commission was submitted to the Government, containing, amongst other matters, a recommendation that the works remaining to be done should be offered to the original contractors, at a schedule of prices fixed by them (the Commissioners).

This proposition having been acceded to by the Government, and after considerable discussion, agreed to by the contractors, on the 18th April, 1863, contracts were entered into with Thomas McGreevy, for the completion of the Parliament Buildings; and with Messrs. Jones, Haycock & Clarke, for the completion of the Departmental Buildings, at a schedule of prices to be applied to the different classes and items of work.

Under this arrangement, the claims alleged by the contractors as arising out of the first contracts, were left in abeyance.

Before the new contracts were entered into, the specifications were, however, revised; and it was deemed advisable, that instead of paying the architects by commission, as formerly, they should be paid fixed salaries.

In carrying out this system, Mr. Thomas Fuller and Mr. Charles Baillairgé, were appointed joint architects for all the Buildings; and in accordance with the provisions of the new contracts, a general superintendent was also appointed.

The architects formerly in charge of the Buildings, preferred certain claims against the Government, for matters arising out of their supervision under the first contract.

The works were proceeded with, and considerable progress made in the season of 1863. During the Session of this year, the sum of $100,000 was granted towards construction.

In May, 1864, it was deemed advisable that the Chief Engineer should proceed to Ottawa, and assume control of the works, in order that questions connected with them might be determined on the spot, and thereby avoid the delay caused by reference to the Department, then at Quebec. The method of furnishing supplies of gas and water, &c., was then decided, and the necessary works for these objects commenced.

During this season (1864), all the branches of work connected with the Buildings were urged forward as rapidly as circumstances would permit. In the Estimates for this year, a further sum of $400,000 was appropriated towards their completion.

The contractors having repeatedly requested a settlement of the claims alleged by them to have arisen out of their first contract, and the architects having also applied for a settlement in connection with their supervision, it was decided in October, 1864, to refer these matters to special arbitration.

For this purpose the Government appointed one arbitrator, the claimants another, and these two selected a third. These three gentlemen formed a Board, before which the several cases were argued by Counsel, and evidence produced by the respective parties. The arbitrators, after a searching enquiry into the various matters brought before them, awarded to Messrs. Jones, Haycock & Clarke, in connection with their contract for the Departmental Buildings, on the 8th day of March, 1866, the sum of $88,176, and for costs the sum of $2,203.

In the cases of the architects, the arbitrators awarded on the 2nd day of July, 1866, to Messrs. Fuller & Jones, the sum of $5,064, and $181 for costs; and to Messrs Stent & Laver, the sum of $6,931, and $200 for costs.

In May, 1865, the services of Mr. C. Baillairgé, one of the architects, were dispensed with.

In May, 1865, it was decided that the Public Departments should be moved to Ottawa in the fall of the year, and the contractors were notified to make every exertion to have the buildings ready for their reception by that time.

The clearing and grading of the grounds was then proceeded with, and the formation of roads to the different blocks of buildings urged forward. By the month of October, the Buildings were sufficiently advanced to permit of their occupation by the several Departments to which they had been allotted, and the roads were partially made. About this time the removal of the Government took place.

The wings and central portion of the Parliament Buildings were also in such a state of forwardness as to admit of a number of the offices being occupied, and of the library being placed in the Building.

This year the Legislature granted a further sum of $300,000 toward the completion of the works.

In May, 1866, the claims preferred by Thomas McGreevy, for matters arising out of his first contract for the construction of the Parliament Buildings, were, by mutual consent, referred to the sole arbitration of the Chief Engineer, who, after hearing and considering the evidence produced, awarded to the claimant,on the 12th day of November, 1866, the sum of $61,785.

The two Chambers and other rooms necessary for the accommodation of the Legislature were so far completed as to admit of a Session being opened on the 8th of June, 1866, during which the sum of $500,000 was granted towards the Buildings.

In November, 1866, permission was given to Thomas McGreevy to transfer his contract for the completion of the Public Buildings to Robert H. McGreevy.

In the fall of this year the Departmental Buildings were completed, and in March, 1867, a settlement in full was made with the contractors for all work performed under or connected with the new or second contract, which, in the aggregate amounted to the sum of $436,199.72.

In February, 1867, authority was granted to make certain alterations in the Legislative Assembly Chamber, for the accommodation of the increased number of Members forming the House of Commons under the Confederation of the Provinces. These works are now completed.

The Departmental Buildings having been finished, and the works on the Parliament Buildings well advanced, the staff was considerably reduced in the spring of 1867, and in the month of May, the services of Mr. Thomas Fuller, architect, were dispensed with.

GENERAL DESCRIPTION.

The site chosen for the Buildings is in the centre of the City of Ottawa, about a mill below the Chaudière Falls, on a prominent rocky point jutting out into the Ottawa River, at an elevation considerably higher than the city and lands in the vicinity. On the eastern side it is flanked by a deep ravine, in which are situated the combined locks of the Rideau Canal. The north side is bold and precipitous, and on the western side the ground slopes quickly towards the south-west and diminishes in width. On the southern or lowest side, it is, for a distance of 1,750 feet, bounded by Wellington street, which is one of the principal streets of the city, and descends in a westerly direction towards the Falls.

The point is of an irregular shape, 1,050 feet wide at the centre, and contains an area of fully 29 acres. It was formerly known as Barrack Hill, and is a part of the Ordnance Lands conceded to the Province.

The Buildings are placed so as to form three sides of a quadrangle, measuring from north to south 600 feet, from east to west 700 feet, and containing an area of over 9½ acres.

The Parliament Building is on the north side of the square, upon which it has a frontage of 472 feet. It faces toward the south, and its extreme depth at the centre is 370 feet, covering an area of about 82,886 superficial feet, or about $1\frac{9}{10}$ acres.

The Departmental Buildings form the east and west sides of the square; they are of a rectangular shape, having both quadrangle and southern fronts, the line of the latter being 100 feet north of Wellington street.

The Eastern Block has a frontage on the square of 319 feet, and 245 feet on the south. It covers an area of 41,840 superficial feet, [or fully nineteen-twentieths of an acre.

The Western Block has a frontage towards the south of 277 feet, and on the quadrangle of 220 feet, with an area of 36,276 feet superficial, equal to about seventeen-twentieths of an acre. Thus the total area covered by all the Buildings is about $3\frac{7}{10}$ acres.

The Parliament Building is on the highest part of the ground, and its basement floors are about 159 feet above the ordinary summer water level of the Ottawa River. Those of the Eastern and Western Blocks are respectively 135 feet 3 inches and 142 feet 3 inches over the same datum.

A continuous carriage road has been made all round the square, and extended northward at both ends of the Parliament Building towards the Speakers' Towers, and also along the southern fronts of the Departmental Buildings.

The entrances to the grounds are opposite Elgin and Metcalf streets. From these points the roads incline gently to within a short distance of the Parliament Building, where they ascend by a steeper grade to the level of a wide terrace, which has been formed along the southern front of that structure.

The square has been graded to a gradual rise from the road which runs parallel with Wellington street up to the foot of the terrace, and to a plane corresponding to the levels of the Eastern and Western Blocks.

All the Buildings are constructed in what may be termed the Pointed Gothic style of architecture, and from the bold, broken outline they present—their numerous towers, high pitched, variegated slate roofs, pierced by dormers and surmounted by ornamental wrought iron cresting and terminals, together with the quaintness of the carved figures, combine to produce an imposing and picturesque effect.

The outer facing of the walls is principally composed of a light colored, compact sandstone, obtained from the Township of Nepean, at a distance of about 12 miles from the city. The dressings, stairs, gablets, pinnacles, &c., are chiefly of a greyish colored freestone, from the State of Ohio, and the relieving arches over the door and window openings are of a reddish sandstone, from Potsdam, in the northern part of New York State. The slates are generally of a dark color, with bands of a lighter hue placed at intervals. They were obtained in the State of Vermont.

The foundations and interior portions of the walls are of limestone, quarried in the vicinity. The division walls and lining of the external walls are chiefly of brick, manufactured either at Ottawa or at other places in the Province.

The marble used in the Buildings was principally obtained from Arnprior and other places on the Ottawa River.

The valley of the Ottawa also supplied the timber used in the construction, with the exception of the oak, which had to be brought from other parts of the Province.

PARLIAMENT BUILDINGS.

SOUTHERN FRONT.

The southern façade of this Building is, as already stated, 472 feet long. It is three stories in height, the basement being entirely over the ground line; the top of the main cornice is about 45 feet in height, and the front is divided into five horizontal bands, by belt-courses at the sills and springing of the doors and window openings of the different stories. This produces a degree of regularity, which is, however, broken by the heavy projections of the central and wing towers.

The central Tower is about 30 feet square, exclusive of the angle buttresses, which are of an octagonal shape, and terminate in open, clustered columns, surmounted by pinnacles with carved finials. It is divided by belt-courses into five unequal vertical spaces, in the lowest of which are lofty archways (embracing the height of the basement and ground floors) on three of its sides. These are constructed of deeply-cut mouldings, enriched with carving, and ranges of marble columns. They open into a groined carriage porch, in front of the main entrance, the latter having the Royal Arms, elaborately carved, orver the doorway.

The second, or inter-story, is marked out by the same horizontal lines as the first floor story of the main structure, and has three arched windows, and two niches, of similar dimensions, on each of its three sides. This portion of the Tower can be used for Committee Rooms or other purposes.

Three sides of the third space are divided, vertically, into two compartments, in each of which are three deeply-sunk, moulded, arched and weathered panels, with narrow perpendicular openings for the admission of air. The wall forming the fourth side is hid from view by the main roof.

In the fourth or largest space, or story, are two deeply-weathered, moulded, enriched, and ornamentally perforated belfry windows, on each side. These form a striking feature in the elevation of the Tower, and add greatly to its general effect.

Over these windows there is a heavy moulded and enriched cornice, immediately above which the angle buttresses are capped by the clustered columns and pinnacles above referred to. Between these, on all the four sides, are pointed gables, in which are constructed circular openings for clock faces, inscribed by pointed relieving arches. The gables, pinnacles, &c., are enriched with crockets.

The masonry of the Tower is complete, but the roof is as yet unfinished ; it has been carried up to a height of 156 feet above the surface of the terrace. From its mass, and the variety of light and shade produced by its deeply recessed windows, projecting buttresses, and the characteristic ornaments of the style, it presents a very imposing appearance.

On each side of the central Tower the main structure extends for a distance of about 100 feet, where it connects with the wings.

Near the angle formed by this junction are double flights of outside stairs, with moulded cut stone railings and carved balusters, leading to the entrances for Members of the two branches of the Legislature.

As already stated, the horizontal lines by which this front is marked form a striking feature in the elevation. This portion is, however, diversified on either side of the central Tower by a large tracery window, which lights the main vestibule, and by the irregular size and height of those at the public stairs, leading to the galleries of the Houses.

In the regular part of the façade (including the wings) there are, on the ground floor, 28 cusped openings for windows and doors, over which, in the first floor, are 52 smaller window openings, generally in pairs, with the exception of those in the angle towers, where there are three windows in the first floor over two in the ground floor.

Between the arches of the lower openings there are carved circular sunk ornaments, with rings of Potsdam stone.

In the roof of that portion of the main Building, between the central Tower and wings, there are, on each side, seven dormers and three chimneys.

The wings are each 121 feet long, and have a tower, carried up at each of the four angles, shewn on the southern face. These stand about 4 feet beyond the general line of the face (in range with the front of the angle buttresses of the main Tower), and are built up to correspond with the leading horizontal lines and general features of the structure.

That portion of each Tower which is carried up in masonry over the main cornice reaches to the top of the central roof, and is divided into a series of moulded tracery panels, with vertical perforations for the admission of light and air, over which is a heavy cornice, with rows of gablets.

These towers are covered by high pitched truncated roofs, in each side of which are constructed three dormer windows, surmounted by wrought iron terminals. The flat portions of the roofs are finished with cresting painted deep blue, with the prominent points gilt.

The ridge of the slated roofs covering those parts of the wings between the angle towers, is a little lower than that of the central portion. In this space there are five dormers and two chimneys at each end of the building.

In the centre of each wing is a flight of outside stairs with a carved balustrade, leading to what are termed the Clerks' Entrances.

At the ground floor line the walls have, throughout, a heavily weathered offset, in which are partly placed small arched windows, for admitting light to the basement. Two doors for access are also provided.

The above constitute the main features of the southern elevation of the Parliament Building, in addition to which, however, there can be seen from the quadrangle, the highest parts of the roofs of both Houses; and the ventilating towers at their northern ends, together with those situated at other places. The tops of numerous chimneys in the rear are also visible.

Before attempting to describe another view of the Building, it is deemed proper to state, that a line through the centres of the main tower and Library, divides the ground plan of the whole structure into equal parts. The elevation of the western side is also repeated in all its features on the eastern side. It will therefore be obvious, that (for the present purpose) the following description will serve for both sides :—

WESTERN FACADE.

The horizontal outline of the western side may be briefly described as follows :—

The end of the western wing, which is the most salient point in this view, stands on the extreme right, and has a length of about 105 feet. The angle towers project about four feet beyond the general line of its front. North of this is the lean-to and Speaker's tower, situated on the west side of the House of Commons. This face has a length of 112 feet, and stands back about 100 feet from the line of the wing. To the left of this tower, but set back from it 108 feet, appears about 28 feet of the connection between the main Building and the Library. The latter, which is on the extreme north of this view, is in ground plan of a circular shape in the centre, inscribed by a polygon lean-to of sixteen sides, and presenting on the horizontal plane of this elevation, a length of 126 feet.

This end of the western wing presents a similar appearance to that of the southern face already described:—with the exception that there are no outside stairs leading up to the level of the ground floor—the entrance from this side being in the centre of the basement, and on the level of the terrace. In the ground floor there are nine, and in the first floor eleven, cusped window openings. The lean-to above mentioned, is carried up one story above the basement, and has eight arched openings on the ground floor. In its roof a continuous line of dormers has been constructed, for the purpose of admitting light into the corridor on the west side of the Chamber. In the basement there is an entrance to the tramway leading through the upper part of the boiler-house, and a flight of outside stairs to the Reporter's entrance, which is on the level of the ground floor. Above this lean-to, a part of the side wall of the House of Commons is seen, together with the high ventilating towers on the northern end. In the side of the Chamber appear five large ornamental tracery windows, by which it is lighted. The skylights in the roof are also partly visible.

The main extracting shaft, which is built at the north end of the boiler-house, stands 55 feet above the roof of the House of Commons, and forms a striking feature in this view.

The Speaker's tower is in two stories, and is carried up to the same height as the main cornice on the southern face. There are two windows in the ground floor, and three in the first floor. It is covered with a high pitched truncated roof, lighted by dormers, and finished with cresting. The entrance is on the ground floor, and is approached by a flight of outside stairs on the northern side.

The connection between the main Building and the Library is comparatively low, being only one story above the basement. This has the effect of detaching in a distinct manner the masses of these two structures.

The Library is but partly built, and is surrounded, as before stated, at its base by a lean-to of polygonal shape, at all the angles of which are buttresses carried up solid to over the height of the lean-to. These are intended to serve as bases for the flying buttresses, which will receive the thrust of the main vault of the Library.

In the central compartment formed by the buttresses is a doorway, with a window on each side, and in the two spaces adjoining there are three arched windows. The other compartments are differently arranged, having seven windows in each, of irregular height, and crowned with an ornamental gablet, or pediment, the apex of which rises considerably above the level of the lean-to cornice.

This lean-to is built its full height and roofed; but the main walls of the Library are at present only carried up to the level of the underside of the large windows for lighting the central portion of the Building, or to a height of 43 feet above the finished surface.

From the description already given of the southern façade, it will be evident that although the long horizontal lines by which the respective stories are divided are broken by the central and angle towers, yet the general effect is comparatively regular.

On the western side, however, a more striking outline, and at the same time a pleasing contrast, is obtained by the irregular height and shape of the various masses which compose this elevation.

These remarks, of course, apply equally to the precisely similar appearance presented by the eastern side.

INTERIOR ARRANGEMENT.

On entering the Building through the large doorway under the carriage porch at the central tower, the first apartment is the main vestibule. This consists of two parts: the first being a semicircular space, 32 feet by 11 feet, included between the rear line of the tower and the front wall of the main Building, which is here supported on two columns and three arches of sandstone; beyond this is the principal part, measuring 72 feet by 38 feet, and 24 feet high.

In the north wall are five tracery windows with quarry lights, opening on the central court; and in the south, on either side of the tower, is a large ornamental window.

The floor is of Portland cement, raised three steps above the level of the terrace, and about 11 feet from the north wall there is a line of six columns and seven moulded arches of sandstone, carrying the corridor wall above. In three of the spaces between these columns are three steps up to a platform, from which flights of stairs, 10 feet wide, lead right and left to large landings, with circular projections beyond the line of the columns, and at a level of two steps below the ground floor. From these, doors lead on the north side to the public stairs, and on the east and west sides to the lobbies of the respective Chambers. There are also doors south of the latter, leading from the circular part of the landings to the first floor and to the galleries of the Houses.

The columns referred to have elaborately carved capitals, which are believed to possess considerable artistic merit. The flights of steps and landings have an ornamental stone balustrade.

Under each of the south windows are three enriched arched openings for the admission of warm air. There are also two arched openings of a similar description on each side of the circular space inside of the main entrance. To the left is a door leading to the Messengers' apartments, and on the right there is one leading to the basement. The ceiling is formed of pine sunk panelled work, with tooth enrichment oiled and varnished.

This vestibule is used in common as an entrance to the apartments allotted to both branches of the Legislature.

On the east is the Senate side, and on the west that of the House of Commons.

The area covered by each side of the Building is precisely the same, and the internal arrangements nearly alike, with the exception of the Chambers.

It is now proposed to give a brief description of that half of the Building allotted to the use of the House of Commons.

The entrance to the lobby is by a door already described as leading from the vestibule by two steps to the level of the ground floor. The lobby is 71 feet long and 24 feet wide, and in the centre there is a range of five columns running in an easterly and westerly direction, with arches between, supporting the north corridor wall above. The shafts of these columns are of polished marble from Arnprior, and the carved capitals and moulded arches over them are of sandstone. The south wall of the lobby is pierced by eight arched openings. That in the south-east corner is occupied by a cut stone tracery window, opening on the public stairs leading to the gallery, and in the south-west corner is a doorway from the Members' entrance.

The other six archways are chamfered and finished with cement. Four of these on the western side are opposite the Post Office:—and 4 feet behind them is an ornamental, deeply sunk and moulded tracery screen 8 feet high, with ground glass panels, inside of which are the letter boxes. The top is finished by a line of low cresting, and the screen is principally executed in pine, oiled and varnished.

A waiting room is formed behind the other two archways, which has a screen similar to, and in line with that described.

Forty-nine feet of the north side of the lobby is occupied by the wall of the House of Commons, in which there is no opening. On each side of this wall there is a corridor 11 feet wide, separated from the lobby by a tracery screen of pine, oiled and varnished, finished at the top by wrought iron cresting. At the east end of the lobby there is a large cut stone tracery window, glazed with ground glass quarry lights.

The floor and skirtings are of Portland cement, and the ceiling is of deeply sunk and moulded panelled work, with tooth enrichment.

At the west end of the lobby is an arched doorway, with side and fan lights, the heads and jambs of which are finished in cement. This leads into the wing corridor, 11 feet wide, extending a distance of 100 feet to the suite of rooms at the western end of the Building and around the wing court, which is 36 by 30 feet, and has ten windows opening on it for lighting the corridor and admitting air to this part of the structure.

Along the the north side of the corridor are six Committee Rooms, and on the south side are the Accountant's Room, and arched openings to a flight of circular stairs (termed the "Committee Stairs"), which has a skylight at the level of the attic floor.

At the west end of the wing are the Sergeant-at-Arms apartments and closets, and on the south front are rooms for clerks. To this wing there is a separate outside entrance, before referred to.

All the door openings have pointed arches, with fan-lights between them and the flatter arches forming the door heads. The ceilings are similar to that over the Lobby, being of pine, panelled, moulded, oiled and varnished. The corridors referred to as opening off the lobby, pass all round the Chamber; the exterior dimensions of the latter being 85 feet by 49 feet. The entrance to the Bar of the House is in the centre of the eastern corridor, near the north and south ends of which are situated the Member's entrances. Outside of each of these doors is a panelled, moulded, tracery porch, with doors which open either way.

In the eastern side are the windows, which admit light form the central court, and a door leading down to the boiler-house.

The north end of this corridor is slightly contracted by the piers of an arch, carrying a wall connected with the ventilating tower above. The west corridor is similarly arched over, and also both ends of the north corridor.

The entrance to the Picture Gallery (which serves for a temporary Library) is at the north-east angle of the last corridor; and from the north side of the north corridor are doors leading to the Smoking Room, Reading Room, and to the Speaker's entrance; on the left of this is the Speaker's office, which is 25 feet by 23 feet, with a dressing room, bath, &c., attached. These apartments are convenient to the Chamber, and have a private entrance from the north side of the Building. They command a fine view of the Ottawa River, the Chaudière Falls, and the surrounding country.

The light for the north corridor passes through the skylights over the Reading Room and is admitted through a series of ornamental openings between low pillars, near the ceiling of the north wall.

There are two entrances to the Chamber on the east side of the western corridor, with porches similar to those already described. On the west side there is a door opening to the stairs leading down to the basement, another to closets, and two to Committee Rooms. This corridor is lighted in a like manner to that on the north side. The floors are of Portland cement, and the ceiling of pine panelled work, oiled and varnished, similar to that over the lobby of the House.

Along both sides of the north and west corridors are ranges of wardrobes for the use of Members.

The foundation walls for the corridors around the House and through the wings, form similar passages in the basement. They are, however, intersected by the line of the tramway, which is two feet above the level of the basement floor. These passages have, in some cases, been utilized for the storing of records and books connected with the House.

At the foot of the flight of stairs referred to as leading from the western corridor to the basement, the first room to the left is the Telegraph Office, and alongside of this, in the Speaker's Tower, is the dining room attached to his apartments. To the right are lavatories and closets, and a short passage running under the western corridor and opening into the Saloon, 34 by 25, which is also entered by steps down from the tramway. Nearly opposite the foot of the stairs is the passage under the north corridor, leading towards the east. On the left of this is a large dining room for Members, and beyond it, under the smoking room, is a kitchen, provided with a range, &c. There are larders and other rooms in the vicinity.

The passage under the east corridor is fitted up with shelves for the reception of official records; the space alongside of the piers under the Members' lobby is also fitted up in a similar manner. The basement of the wing contains apartments allotted to the Sergeant-at-arms, which are entered from the west end. On the north side and part of the south front are rooms for the Chief Messenger, who can enter by a door in the rear of the Building.

The spaces under the Post Office and Waiting Room are used as a Messengers' waiting room, metre room, vaults for records, &c. The basement floors, where used or occupied for rooms, are formed of Portland cement; but those of the dining rooms and saloon are of pine laid over the concrete.

The basement on the Senate side is similarly arranged,—except that the saloon is fitted up for records; the space under the Members' lobby is used only for storage, &c., and the Messengers' room is on the ground floor instead of the basement.

The vaults under both Houses can be used for the storage of fuel.

The space under the central court, 68 by 74½ feet, is occupied by the boilers and apparatus connected with heating and ventilation. From this point warm air vaults and cold air ducts extend in various directions throughout the basement. These will be more particularly referred to under their proper heads.

There are, as before mentioned, two flights of stairs to the first floor of the Building on this side: one of these is the public stairs leading from the main vestibule, and the other is what are termed the "Committee stairs," situated in the wing, There is also a flight of stairs off the vestibule leading directly into the public galleries of the House.

Ascending the public stairs, the landing on the first floor is in the corridor, and directly opposite the south-east angle of the House. This corridor runs the whole length of the south front of the building, with the exception of the suites of rooms at each end. It is divided by four arched doorways with side lights, one at each of the southern angles of the Houses. It also extends around the wing court, and is throughout immediately over the corridor of the ground floor.

Following the line of this corridor, from the landing at the head of the public stairs towards the east end of the Building, the first room on the right is that apportioned to the use of the Contingent Committee; between this and the landing at the public stairs, on the Senate ride, are two rooms, allotted to the Clerk of the Crown in Chancery, together with a passage, leading to a small waiting room, beyond which is a large general Committee Room, in the main central Tower.

The next room beyond the stairs, on the south side, is the Railway Committee Room 36 by 19 feet, to which there are two entrances from the corridor. The room east of this is for the Committee on Private Bills (23 by 19 feet), the entrance door to which is immediately opposite the south-east angle of the Senate Chamber. The four rooms last mentioned are to the eastward of the central Tower.

Starting from the same point, at the south-east angle of the House of Commons, and advancing towards the west, the first five rooms on the left are for committees and clerks. Seventy-five feet of the opposite side of the corridor is occupied by the south wall of the House, in which there are two entrances to the galleries,—one at the south-east and the other at the south-west angle; beyond the latter there is a stairway leading to the attic, in a small room for messengers.

Next on the left is the space occupied by the Committtee stairs. On the north side (including the Angle Tower room) are apartments for Committee Rooms and French Translators. On the west end of the Building are the closets, and Sergeant-at-Arms' apartments. The south front of the wing and the adjoining room are occupied by the English Translators, Law Clerks, and Stationery. That part of the corridor in the wing is lighted by ten windows, opening on the Court. Opposite the ends of the Chambers the corridor is lighted by means of a panelled glass ceiling, and skylights in the roof. Between the two Chambers the light is admitted by five windows, opening on the central Court. The floor and skirting of the corridor are of Portland cement, and the ceilings (with the exceptions above mentioned) are of pine panelled work, similar to those in the ground floor. All the rooms are provided with double windows, the lower halves of which are hung, and arranged to slide up in the casements, thus obviating the necessity of removing one set during the summer season; they are also furnished with inside venetian blinds. There is a fire place in each room, with a pointed arch and moulded chimney-piece, and hearth of sandstone.

The floors of all the rooms are of pine, grooved and tongued, laid in narrow widths, and fastened to strips embedded in the concrete underneath; the skirtings are also of pine, chamfered and grooved into the floors. The ceilings of all the principal rooms are of pine, moulded sunk panelled work, oiled and varnished.

In the rooms with plastered ceilings there are cornices suitable to the sizes of the various apartments.

There are also stands (with marble tops) and wash-basins in most of the rooms; these are provided with silver-plated taps.

The division walls of the interior are chiefly of brick, and the floor joists are of rolled iron of a sectional area varied to suit the lengths between the bearings. These are generally laid 18 inches apart, and upon the lower flanges boards are placed transversely to carry the concrete, which has a general depth of 12 inches. In this manner the floors of all the rooms, corridors, &c., are constructed, both on the ground and first floors, and attics, and also the floors of the two Chambers, together with those portions of the ceilings over the corridors and galleries. This renders the Building, below the attic floor, in a great measure fire-proof, and cuts off the means of its being communicated to the wooden roofs of the Building, except at the Committee stairs and at those points south of the Chambers on the first floor where the corridor ceiling is of glazed panelled work. Between the roofs of the other parts of the Building and those of the Chambers are cut-off brick walls, which lessen the probability of fire extending in this direction, whilst the wooden ceilings of both Chambers are at such a height as to be comparatively secure. The outer coverings of the roofs being of slate, lead and galvanized iron, it will be evident that the risk of fire is confined to as narrow limits as possible, considering that the roofs throughout are of wood;—that is to say, it can only spread in the attics and roofs themselves.

On the north side of the central court is a suite of rooms allotted to His Excellency the Governor General and the Chaplain to the Senate. These open into the Picture Gallery (which measures 28 by 54 feet) and is also entered by doors at the angles of the corridors leading round the Senate and the House of Commons. This apartment is 25½ feet high, and the ceiling of a part of the slope of the roof on either side is of pine panelled and moulded work, similar to that of the corridors. The centre of the room, however, is covered by a flat ceiling, panelled, and filled in with ground glass, through which light is admitted from skylights formed in the roof.

There is a door in the centre of the north side opening to a passage leading to the Library proper, at the end of which is a highly ornamental arched, moulded, and enriched doorway, with clustered columns and carved capitals. At this point a temporary partition has been erected so as to enclose a space of 36 feet by 11 feet (the passage), which, together with the Picture Gallery and the adjoining rooms, has been fitted up for the reception of a part of the Library of Parliament. In the larger room is a gallery running around its four sides for access to the higher ranges of books, which could not otherwise be easily reached from the floor.

The Smoking Room on the Senate side (about 36 by 15 feet), which is entered by a door on the north corridor, has also been fitted up for part of the Library.

CHAMBER.

The House of Commons measures 82 feet by 45 feet inside, and is arranged for the accommodation of 194 Members.

It is lighted from the ceiling, and by means of large windows on three of its sides.

In the centre of the western side is the Speaker's chair, opposite which, on the eastern side, is the Bar, and a door opening into the adjoining corridor.

The floor of the House occupies a space 16 feet wide, and to the north and south of this are 7 ranges of desks. The two front ranges are on the floor, and the other five on each side are placed on platforms which rise each seven inches as they recede from the centre towards the north and south ends of the Chamber, where they are about 3 feet above the floor level. In the risers of the platforms are perforated cast-iron gratings for downward ventilation.

The desks are placed in pairs, and between each pair is a narrow passage to afford access to the seats.

Between the ends of the platforms and the east and west walls of the House there are passages 3 feet wide, by which Members entering at the side doors can either pass on to the floor of the House, or ascend by means of steps to the level of the rear platform. A brass railing separates this passage from the ranges of seats which stand above the floor level.

In the centre of the floor of the House there is a large opening covered by a perforated grating, through which cold air can be admitted to the Chamber during periods of adjournment. Over this are placed the Clerks' table, and that for the Mace.

The five entrance doors to the House have inside porches of panelled, moulded and tracery work in pine, and are covered by glass ceilings.

Walls are carried up round the area described (82 feet by 45 feet) to a height of 16½ feet over the level of the floor. These walls are divided by marble pilasters on the east and west sides into five bays each, and on the north and south ends into three bays. Between the pilasters, and extending all round the Chamber, is a projecting cornice of marble, the top of which is on a level with the floor of the gallery. The pilasters terminate at the height of the railing along the front of the gallery, and upon them are placed clusters of marble columns with carved capitals. From these spring pointed arches, reaching nearly to the ceiling, which is horizontal, and 45 feet over the floor of the House. Behind these arches, and extending back to the main walls (a distance 12½ feet) are he galleries, immediately over the ground floor corridors, around the House. The pilasters, clustered columns, cornice and arches are of blue veined marble, polished.

Alongside the Chamber walls, at a height of about 6½ feet over the floor, there is a continuous line of openings for the admission of warm or cold air. This is covered by an adjustable perforated grating of brass, placed at such an angle as to give a proper direction to the current. At the north and south ends of the Chamber, the openings in the centre bays, between the pilasters, communicate directly with the duct, and air is supplied by means of a large tube from the fan in the boiler house. This arrangement is for the purpose of changing the air in the Chamber as rapidly as possible when required.

Immediately under the marble cornice, there is also a range of ornamentally perforated cast iron gratings for the introduction of air. The gallery front is formed of a line of pine panelling, ornamented with quatre-foils, oiled and varnished. Upon this is placed a range of wrought iron standards supporting a walnut rail, at the height of the pilasters above referred to, or 19 feet above the floor of the House.

The southern three-fifths of the east gallery is allotted to Members of the Senate, and is entered by a door opposite the head of the first floor stairs. The other two-fifths of the east, and the whole of the north gallery is for the public, and is approached by a separate stair leading off the main vestibule. The south gallery is for the ladies, and the southern part of the west gallery is for persons admitted by the Speaker.

In each of these galleries are three ranges of seats, rising 14 inches above each other, with passages at intervals between them. In the south gallery there is, however, a fourth range of seats alongside the wall.

Three bays of the north part of the west gallery are arranged with desks and divisions for the accommodation of Reporters, and in rear of these there are seats provided for other persons connected with the Press. To these gentlemen have also been allotted two rooms, immediately over each other, in the Speaker's Tower—one on the level of the gallery and the other in the attic, which is lighted by large dormers on two of its sides. To these rooms there is a separate stair and an outside entrance.

In rear of the three bays, formed by the arches in front of the north gallery, there are three large windows, of elaborate design, with mullions and tracery of sandstone, the inside sashes being filled with richly ornamented stained glass. On each side of these is a narrower window, of a similarly ornate character, with stained glass, also of the most brilliant colors.

In the eastern side, and corresponding with the bays between the marble arches, are five windows. The three central (and largest) ones, are formed of five narrow lancet windows, with tracery heads; that on either side is composed of four lancet windows of similar design.

On the west side there are four windows, similar to those opposite.

They are all glazed with richly ornamental stained glass, and both the side and end windows have an outside glazing of quarry lights.

In line of the arches over the gallery fronts, there are at each corner two pointed arches, of about 10 feet span, reaching over the galleries themselves; those at the north end support the ventilating towers. These arches spring on one side from carved corbels, built into the main walls, and on the other from the larger clusters of columns at each angle of the House. In all the four corners included between these arches and the side walls, are groins with moulded ribs of marble, filled in with brick and plastered. The ribs, which start from the angle of the exterior walls, also spring from ornamental carved corbels.

The ceiling over the galleries is formed of deeply moulded panel work, with tooth enrichment, oiled and varnished, and has a somewhat similar appearance to those over the corridors on the ground floor; except the space opposite the centre bay, on each side, in which the panels are filled in with perforated cast-iron plates, for the purpose of upward ventilation.

The arches over the gallery fronts are, as before stated, supported by clustered columns of polished marble, resting on pilasters of the same material. The larger clusters at the four angles consist of one heavy central column, wrought and sunk so as to represent five columns, around which are arranged eight smaller ones. The twelve intermediate spaces between the angles are divided by smaller clusters, consisting of one large central column, encircled by four of less diameter. All the columns measure 6 feet 2¼ inches, from the top of the pilasters to the capitals. About midway between these points there is a projecting band, which encircles the whole cluster. The capitals are 18 inches high, and carved to represent foliage. From these spring the respective arches, which are deeply moulded and polished, and carried up to a height of 41 feet 8 inches over the floor of the House.

In the spandrils between the arches, on all the four sides of the Chamber, are rose shaped openings, inscribed in circular mouldings of marble, 4 feet 6 inches diameter. At the height of 1 foot over the apices of these arches is the line of the underside of the main cornice. This cornice is 2 feet 6 inches high, and has a projection of 18 inches. It consists of several deeply moulded members, with a carved enrichment in a cove near the lower side.

The moulded framework of the ceiling is divided into sixty panels, and in the divisions are ranges of perforated quatre-foils for the purposes both of ventilation and ornament. The panel work is deeply moulded, and has a tooth enrichment. Both it and the cornice are of pine, oiled and varnished, and the panels are filled in with ground glass, through which light is admitted from skylights placed in the roof.

From the foregoing description of the House, some idea may be formed of the effective result which its large dimensions and generally ornate character could scarcely fail to produce.

The chief features of the interior are characteristic of the style of architecture in which the Building is constructed, the lofty arches over the gallery fronts are pointed, and the clusters of marble columns supporting them are light and graceful in appearance, whilst at the same time they possess ample strength.

The tracery windows in the main walls are of elaborate design, and are filled with richly colored stained-glass, representing the Royal, Provincial, and other coats of arms, together with various heraldic devices, emblazoned in brilliant hues. The light thus admitted throws the ranges of arches along the gallery fronts into relief, and greatly enhances the beauty of the interior.

The groined arches at each angle of the Chamber also form attractive features, and the peculiarities of the style are artistically carried into minute details.

The Senate Chamber is of the same dimensions, and presents throughout a similar appearance to the House of Commons, except that the arrangement of the Speaker's Chair, desks, &c., on the floor of the House, and the positions of the entrance doors are different.

The Throne and Speaker's Chair are situated in the centre of the north end of the Chamber, and the floor of the House extends from north to south, 15 feet wide. The Bar is at the south end, and the wardrobe for the Senate is off the east corridor. The Throne in this Chamber, and the Speaker's Chair in the House of Commons, are both of a temporary character.

DEPARTMENTAL BUILDINGS.

The Departmental Buildings (which flank the square) are, for the most part, two stories in height, the basement being generally sunk below the ground level, and the main cornice about 40 feet over the finished surface. The Eastern Block has a picturesque and broken skyline, and, from its numerous towers and projections, presents a great variety of light and shade.

The Western Block, although not so ornate as that opposite, has a sufficiently diversified exterior to produce a pleasing effect.

EASTERN BLOCK.

Quadrangle Front.—This, as already stated, is 319 feet long, and the principal tower, which is situated at the south-west angle, is set back 16 feet from the line of both this and the southern front. At the north-west angle, the end of the north wing stands back 15 feet from the front line.

The basement floor throughout is considerably lower than the surface of the ground, and six of the openings in it for light are enclosed by detached sunk areas. At the north end, the area is continuous.

The central portion of this front, for about 54 feet in length, has a projection of 3 feet, and is three stories high. The middle part of this (25 feet long) has a further projection of 3 feet to the line of the angle towers, and corresponds nearly in length to the Governor General's carriage porch, which stands out 18 feet from the general line, and forms the most prominent feature in the ground plan of this face.

The porch is principally built of cut stone. It has three arched openings on the west face, one of which is a doorway. The carriage entrance is by archways on the south and north faces. Inside, the roof is groined. Over the front arches there is a pediment, in which the royal arms are elaborately carved: this is surmounted by a wrought-iron terminal.

On each side of the entrance door under this porch there is a window to light the vestibule, and on either side of the middle projection there are two arched windows, with sunk panels underneath on the ground floor level.

Immediately over the roof of the carriage porch, there are three combined windows, which light the Governor General's room, and one large window on each side of this, on the first floor. Above this there is a large tracery window and two smaller ones.

At the level of the cornice, over the first floor, two projecting angle buttresses are started on the main central portion, and are carried up to the elaborate cornice which runs along its top. They are crowned with enriched pinnacles. The masonry of the middle compartment is carried up somewhat higher than this, and has a lighter cornice, with a small pediment in the centre, corresponding with the arch over the tracery window above referred to. The roof of this is truncated, but not so elevated as that over the main central portion, which has a similar outline, and stands high above the roof on each side. These roofs have wrought-iron cresting and terminals.

On either side of this central part there are two recessed bays of 47 feet, each of which is divided into seven vertical compartments. Three of these contain windows—two on the ground floor, and one large window immediately above them on the first floor.

Over this is a heavy cornice from which the roof is carried up level with the top of the central tracery window.

These bays are flanked by two low towers, each about 30 feet wide on this view. That on the south has two windows on the ground floor, with sunk panels underneath, and one large tracery window immediately over these on the first floor, the apex of its arch reaching to the level of the main cornice over the bays. The masonry is carried up to a height of about 6 feet over this cornice, above which there is a centre pediment containing two small arched windows which light the attic formed in the tower roof.

That on the northern side has two arched windows with sunk panels on the ground floor, and two with larger openings in the floor above. This tower is built to the same height as that just described, but there is no central pediment—in place of which there are three small arched windows—the cornice over the latter being similar to that over the bays before described.

On each side of these low towers are two others—that standing on the south-west corner being, as before stated, the main tower, and forming the chief feature in this block. It has a base of about 36 feet square, and about 13 feet of the central part is recessed for a large window. On either side of this the piers are carried up vertically from the level of the plinth to that of the string course which surrounds the building, at the springing line of the ground floor openings. From this the piers are heavily weathered and constructed of cut stone work to the height of the string course, at the springing of the first floor windows—from which level a double arch of about 21 feet span is carried over the window recess. The apex of the relieving or upper arch is about the height of the main cornice of the low towers previously described.

Between these arches there is included a large surface of cut stone work, in the centre of which is a sunk circular space, enriched by carving.

On each side of this and in the spandrils of the lower arch there are moulded and sunk panels. In the large area between the lower arch and the plinth course, there is a group of three lancet windows, enriched at their bases by sunk panels—and that portion of the recess surrounding these windows is filled in by what is termed "random work."

From the upper string course the tower is carried up vertically to a height of about 56 feet over the ground surface, where there is another weathered offset, which reduces its width to 30 feet. From this it is carried, with perpendicular sides and moulded corners, to a height of about 106 feet, or to where the main cornice commences.

In the space included between these horizontal bands, there is, on each of the four sides of the tower, a large enriched, deeply recessed and weathered tracery window, over which projects a heavy pedimented hood moulding, the apex of which is ornamented by a fleur-de-lis finial, carved in stone, the ends being stopped against grotesque figures.

On either side of this moulding are two circular windows, with quatre-foil shaped openings.

The main cornice has a very heavy projection, and (including the gablets which form its lowest member) is nearly 10 feet high. From this the truncated roof is carried up to a height of 34 feet, and is lighted by two ranges of dormers on each side. This roof is crowned by a wrought-iron terminal, 56 feet in height, the top of which is 206 feet above the finished surface of the ground.

In the ground floor level of the north-west tower (which is 23 feet square), the entrance to the Executive Council end of the building is situated. Over this entrance are two lights, and in the floor above is a large window, similar to that on the first floor of the main building.

Above this window is a horizontal string course, on the level of the lower member of the cornice of the north wing, from which is started a large tracery window. Over this again (and at a height of about 61½ feet over the ground), there is a weathered offset, reducing the width of tower to 21 feet, and from this it is carried up to a height of 20 feet, to the level of its cornice. In each of the four sides there is a pedimented gable enclosing a tracery window enriched with sunk panels at the base. The whole is covered by a high pitched truncated slate roof, 24 feet 6 inches high, surmounted by a wrought-iron cresting and terminal, the top of the latter being 127 feet over the level of the ground.

To the left of this tower is seen the end of the north wing, which corresponds in height to the main structure. This end is divided into four vertical compartments, in two of which there are four windows on the ground floor, and two larger ones above.

To the south of the main tower is seen the side of the low tower which forms the western end of the southern front—the base of which is however partly hid by the projection of the large flight of outside stairs that lead up to the main entrance to this block.

In this end there are two windows on the ground floor, and one large opening on the first floor. The roof is at the same elevation as the low towers already described.

On the western front there are nine chimneys visible. The ventilating shafts (100 feet high) which stand in the rear can also be seen.

South Elevation.—Along the greater portion of this front the sunk areas for the admission of light are continuous, and the horizontal outline is broken only by the projections of two low angle towers, which stand six feet forward. One of these is situated at the east, and the other near the west end, adjoining the main tower. This front is about 245 feet in length, and is divided by horizontal belt courses, in a similar manner to that of the western elevation.

The main tower is also the most important feature in this view. It stands back 16 feet from the adjoining portion of the walls, and presents a like appearance to that already described, except that, instead of a large window on the ground floor, there is a doorway, which forms the principal entrance to the Building.

This doorway is moulded and enriched, and within the arch immediately over it is carved the Canadian coat of arms; between this and the lower relieving arch are sunk panels.

Starting on the same line as the other arches, above the first floor of the Building, there are two of different heights, between which are two sunk panels, and a circular carved enrichment.

The entrance is approached by a wide flight of outside stairs, on each side of which are walls, coped with cut stone, and massive pillars, surmounted by gas lamps. To the left (but at 48 feet to the north) is the low south-west tower, in which are (on this face) two windows on the ground floor and two on the first floor.

To the right, and adjoining the main tower, is one of the low towers above mentioned. It has a face of 30 feet; and on the ground floor there are two windows, with sunk panels underneath. Over these, in the first floor, is a large tracery window, with three vertical compartments, the top of which is on a level with the main cornice. There is a gable in this front of the tower, with two small arched windows, standing above the large tracery window referred to. This tower has an exactly similar elevation to the low south-west tower on the western face.

The angle tower at the east end is also 30 feet wide, and the same height as that described. It has two arched windows on the ground floor, with a buttress between them, and two on the first floor, corresponding in height with the generality of those on this elevation. In its truncated roof there is also a pedimented gable, with two arched windows.

In that portion of the southern front embraced between these towers, and measuring 136 feet in length, there is another entrance, approached by a flight of outside stairs, with a buttress and pillar for gas lights on either side. This entrance door is built in a recess about ten feet wide, which is carried up to the story above; it is double arched, with a fan-light in the space between. On the first floor, immediately above, there is a large heavily-mullioned tracery window, with four vertical openings, the relieving arch over which springs from the same level as those of the first floor windows. The top of this arch rises above the level of the main cornice:—a central space, 25 feet in width, being carried up to the height of the angle towers to receive its upper part.

On either side of the central portion there are six lancet windows on the ground floor, and three large arched windows on the first floor.

At the east end of this front the Agricultural wing is situated, in which there is a tower over the entrance, of similar height and design to that described as the north-west angle tower on the west elevation; the side of the entrance stairs to this wing is also seen.

This end of the Building overlooks the eastern part of the city, and has been completed in a manner in all respects equal to any other portion of the structure.

There are nine chimneys seen on the south front, and the two ventilating shafts in the rear are also visible.

Interior Arrangement.—The principal entrance is, as before stated, under the main tower, situated at the south-west angle of the Building. It is approached by a flight of outside stairs, 24 feet wide; at top of this there is a landing, 24 by 16 feet. Immediately at the doorway are two steps, in the risers of which are inserted horizontal strips of glass, for the purpose of lighting a portion of the basement. The vestibule occupies the space (24 feet square) within the tower walls, and is carried up on all its sides in free-stone, ashlar rubbed.

The ceiling is a rib groined arch with carved centre, pendant, and springer corbels. The centre of the groin is about 43½ feet over the floor. Around the vestibule, at the level of the first floor, there is a gallery of stone, 4 feet wide, supported by sixteen ornamental wrought-iron brackets,—four on each side,—and provided with a wrought-iron railing. The floor is of encaustic tiles laid in cement. Opposite the entrance is a moulded and stopped arched doorway, in which are side and fan-lights, approached by two steps, and opening into the corridor, extending along the centre of the west front. A similar door with steps, &c., leads into the corridor which runs along the centre of the south front. The vestibule is lighted by the large tracery window seen in the west elevation of the main tower.

At the level of the gallery there are doors of a like character opening to the corridors, immediately above those on the ground floor. All the corridors are nine and a half feet wide.

Advancing from the main vestibule towards the east wing, along the south corridor, on the right, are two piers and three archways which support the wall above. Two of the openings between the piers afford an entrance to the space (24 feet by 24 feet) occupied by the main stairway. Above these are similar piers and arches on the first floor. The stairs are hanging, five and a half feet wide, and start from the foot of the east pier. They are carried along the east wall, and have a landing at mid-story which reaches across the south wall, and is supported by a cut stone screen, formed of three columns and four moulded arches. From this landing they rise along the west wall to the level of the first floor. The stairs and landings have ornamental wrought-iron balusters, with a heavy oak handrail starting from a large newel at the base, and stopping against one of the piers of of the first floor arches.

This space is floored with encaustic tiles, together with that portion of the corridor adjoining. In the south wall of the ground floor there are two square-headed windows, which are seen through the cut stone screen above referred to; and on the west side there are also two windows. Over these, in the first floor, are large tracery windows, all of which are filled with diapered glass, except the circular openings in the heads, which are of ornamental stained glass.

The ceiling is 35 feet 6 inches over the floor, with an enriched plaster cornice run all round it.

This stairway and the adjoining vestibule form attractive features in the interior of the block.

The line of the south corridor is broken by four moulded arches, which spring from pilasters in the face of the walls.

The three rooms on the right beyond the main stairway, and all those opposite on the left, are occupied by the Audit branch of the Finance Department.

Next those on the right is the central entrance, and small vestibule with steps up to the corridor. Opposite this are three archways facing on stairways, leading to the first floor and basement.

The rooms on the south front, between this entrance and the east end of the Building, and three rooms on the left, are allotted to the Receiver General's Department, the Minister's Room being on the south-east angle. Opposite to this is a staircase (19 feet 6 inches by 21 feet 6 inches), which is also entered from a vestibule (18 feet by 14 feet), lighted by fan and side-lights, formed in cut stone, under the Agricultural tower. This stairway leads to the first floor and story above and also to the basement.

The two large rooms, fronting towards the east, beyond this stairway, are apportioned to the Bureau of Agriculture. Those opening towards the west are connected with the Receiver General's Department, and are accessible by a short corridor running towards the north.

Starting from the south end of the west corridor, the first room on the left is that of the Minister of Finance, and the whole of the rooms (four on each side), up to the Governor General's entrance, are occupied by the Finance Department. The vestibule at this entrance is 19 feet by 25 feet, and about midway in it are three steps leading up to the level of the ground floor. The doorway at the corridor has side and fan-lights. Opposite there are two piers from which spring three arches. The openings between these lead to a stairway to the first floor and attic. Under the stairs, in the ground floor level, is a door to the Governor General's bath room.

Between this entrance and that leading to the Council Chamber, the rooms on both sides of the corridor (10 in all) are occupied by the Customs and Excise.

The entrance to the Executive Council has a vestibule, 17 feet square, under the north-west tower, and the doorway to the corridor has side and fan-lights. Opposite this are also three moulded and chamfered archways, similar to those above referred to.

Beyond this the six apartments in the north wing are allotted to the Provincial Registrar's Department.

The line of the west corridor is broken by piers and arches, in like manner to that on the southern front.

In the basement passages are also continued under the ground floor corridors, and the division of rooms is in all cases nearly the same as in the upper floors.

The rooms along the south and west fronts are occupied by the messengers and office-keepers. Those in the rear are used as store-rooms for records and for other purposes.

There are four entrances to the basement in rear of this block, and there are either continuous or detached areas for access to them, and for the admission of light and air.

The divisions of the rooms, in the first floor, are also similar to those below, and the corridor walls are carried up in like manner. Commencing at the gallery around the vestibule and proceeding towards the east, the first space is that of the main staircase already described. The six rooms next, on the right along the south front, and the seven opposite on the left, are apportioned to the Provincial Secretary's Department.

Over the south entrance door on this floor there is a large tracery window with four vertical compartments filled with diapered glass. The circular openings above these have ornamental stained glass. Opposite this window is the landing from the stairs which is lighted by a tracery window in the north wall of the building.

In the east end and wing are rooms occupied by the Bureau of Agriculture. The Ministers' room being in the south-east angle. In the north end of this wing is a large room intended for the reception of models, but at present occupied by clerks. It is 53 by 31 feet, and is lighted by a large bay tracery window at its east end. In the west end there is also a large tracery window, and in the north wall there are two windows.

The ceiling is 22½ feet high with a heavy cornice run around it. In the room between this and the staircase at the eastend (28 by 18½ feet) there is also a large tracery window, in the east front. The Model room is approached by a narrow passage leading to the left off the main corridor. The continuous line of the latter is broken by four arches and piers.

Starting from the south end of the west corridor and proceeding northward, the large room to the left is that of the Attorney General West, and the other two rooms adjoining are for the chief and assistant clerks. On the opposite side is an apartment for the Solicitor General, and a waiting room.

On both sides of the corridor, up to the north side of the centre staircase on this front, are the rooms of His Excellency the Governor General and Staff.

His Excellency's room is immediately over the vestibule, and is lighted by three arched windows on the quadrangle front. North of this is the aid-de-camps' room. The staircase is lighted by a tracery window, filled with diapered and ornamental stained glass.

The next five rooms on the west front, up to and including the north-west tower, are occupied by the Attorney and Solicitor General East, and clerks connected with the Crown Law Department. The four on the right, up to the staircase at the north end, are occupied by Executive Council clerks.

All the apartments in the north end and wing are partitioned off for the Executive Council. The west corridor is, however, continued to the north wall, and the last door to the right opens to the room of the President of the Council. South of this is a short corridor leading towards the east. The first room on the left of this is for the assistant clerk; the next that of the clerk; and in the north-east angle is the Council Chamber, 30 by 21. The ceiling of this room is 17 feet high, and has a heavily moulded and enriched cornice.

The entire attic of the south front, which is approached by the stairway at the east end, is fitted up for a Model room, in connection with the Bureau of Agriculture. This space is about 160 feet long by 35 feet wide, and 19 feet high. There are also four rooms at the east end, for census and other clerks. Above three of these, there are other rooms for like purposes.

Immediately over the Governor General's room is a large tracery window, divided into three compartments. This lights the middle room of three on this front occupied by his office-keeper, who has also another room in the rear.

The above comprise all the rooms occupied in this block above the ground floor. In the main tower, an iron stairway leads from the level of the attic floor to the top.

There are three stacks of water closets and urinals: one opposite the south entrance; another opposite the west centre entrance; and the third opposite the Executive Council entrance. All these are approached from the respective staircases. There is also a closet, the entrance to which is off the corridor leading to the Executive Council Chamber.

The ground, first, and attic floors are formed of rolled iron joists, of depths suited to the various lengths of the bearings. Upon the lower flanges of these, boards are laid transversely, to receive a bed of concrete, which is generally 12 inches deep. Thus the building, with the exception of the roof, may be considered fire-proof.

The floors of the rooms are of pine, laid in narrow widths on strips imbedded in the concrete. The skirtings are also of pine.

The corridor floors are throughout of Portland cement, laid upon a similar arrangement of rolled iron joists and concrete, as that for the room floors, except those portions opposite the main stairway and Governor General's entrance, which are of encaustic tiles, laid in cement. The vestibules at all the front entrances are also floored with encaustic tiles.

The basement passages are floored with Portland cement, laid upon concrete, and the rooms (where occupied) have also cement floors.

The rooms generally have fire places, grates, and hearths, and moulded sandstone chimney pieces, formed by a pointed arch. In the Ministers' rooms the chimney pieces are of Arnprior marble polished, and in the Governor General's room, Executive Council Chamber, and Model room are mantle pieces of sandstone with carved enrichments.

Plaster cornices are run all round the rooms, corridors, &c. The skirtings of the latter are of Portland cement, stopped at registers, projections, and offsets.

The outside doors are of oak, hung with ornamental wrought-iron hinges. The joiner work of the interior is chiefly of pine, painted four coats oil colour. The architraves round the doors, &c., are generally plain, except in some of the most important rooms, where a rope moulding is added. The windows have double sashes, the lower half being hung. This obviates the necessity of taking them down in summer, except where the mullions and sides are of stone.

The rooms are provided with stands (marble top) for wash basins, plated taps, &c.

The boiler house is situated in the rear of the angle formed by the south and west fronts. It can be approached from the basement, and there is also an outside entrance, from the rear of the building.

WESTERN BLOCK.

South Elevation.—This face is 277 feet in length. On the right, the end of the west front, 40 feet wide, stands back about 16 feet from the general line. The elevation proper (237 feet in length) is flanked by two angle towers, each shewing a width of 20 feet. Adjoining these are two projecting portions, 25 feet in width, which stand out 6 feet beyond the front line of the building. The main part (147 feet in length) has a continuous sunk area; and in the centre is the principal entrance door, with a small buttress on each side. The approach to this is by a flight of outside steps, at which cut stone pillars, for gas lamps, are placed Over this doorway are two pointed arches, of different pitches, the intermediate space being formed into a fan-light, above which is an enriched balcony projection, supported on corbels. In the first floor is a large tracery window, divided into four vertical spaces, with circular opening above them. The arch over this window is carried up to the height of the block cornice of the main building.

At this point, for a distance of 28 feet, the wall is carried up 6 feet higher, and is capped by an enriched cornice. The roof is steep, of a truncated shape, and higher than that in its vicinity, which gives this portion of the structure the appearance of a low tower.

On each side of the centre door there is one single and three mullioned windows on the ground floor, and in the first floor, immediately above, are four large windows with single openings. This portion connects with the projections before mentioned, in each of which, on the ground floor, is a double window, and immediately above it a large tracery window, divided into three vertical openings; the top of the relieving arch of the latter is a little higher than the main cornice.

At this point the cornice is carried over in a circular form, and has an ornamental keystone, with a wrought-iron terminal above its upper line. The roof of these projections is of a similar shape to that over the central compartment, but is not carried up quite so high.

The angle towers are 23 feet square, and are carried up vertically to a height of about 66 feet above the surface, where there is a weathered offset, which reduces the width to 21 feet.

In the ground floor of the western tower there is a narrow arched doorway, with a flight of outside steps leading up to it, similarly arranged to that at the central entrance. Over this doorway, in the first floor, is a window of a like size to those in the principal front. At the lower line of the main cornice, the tower is divided by a string course over which, and under the weathered offset referred to, is a tracery window with two vertical openings. Above, and on the right and left of this arch, are two small circular windows, with quatre-foil openings. Over the offset, the walls are carried up vertically to the cornice of the tower, and on all the four sides there are pedimented gables and tracery windows. The roof is of a truncated form, and ornamented with cresting and terminals. The height to its top is 127 feet.

In the eastern tower there is no entrance, but on the ground floor there are two lancet windows. Above this its features are similar to those of the western tower just described —with the exception that on the northern side there is no tracery window—but a large chimney is carried up above the level of the cornice. In the southern end of the west front there is a doorway with outside stairs, &c., similar to that in the western tower, and there is a window to the left of this in the ground floor; over these are two large windows. The roof of this portion is on the same level as the central part of the south front.

There are six chimneys visible on this front and part of the ventilating shaft in rear.

Facing the west and Chaudière Falls there is a wing (72 feet long), on the northwest corner of which is a small octagonal tower, forming a distinctive feature from that point of view.

Eastern Front.—There are nine detached areas along this front, which is 220 feet long; 23 feet of the southern end of this is occupied by a side elevation of the angle tower, and projection on the southern front. The remaining length of 197 feet is flanked by two portions of 24 feet in length, which project 6 feet beyond the general line.

In the centre there is a 3 foot projection, 47 feet long, and in the middle of this there is a length of 25 feet, which stands out 3 feet further, or in line with the angle projections above mentioned.

The recessed portion of the front measures on the north side 54 feet, and on the south 50 feet.

In front of the centre there is a groined entrance porch supported on pillars, with an archway in front, in which are steps leading up to the door. This porch has small arches for light on its north and south sides, and over the centre archway there is a cornice and pedimented gable in which the Royal Arms are carved. Immediately over the door there is a large tracery window, with three vertical openings, the relieving arch of which springs from the same level as that of the first floor windows, and is carried up to the height of the underside of the main cornice. The masonry of the middle portion is built 7 feet higher than this line, and there is then a cornice with a pedimented gable enclosing a double window in the third story. The roof of this portion is truncated in shape, and rises 14 feet above the level of the main roof.

The projection of 47 feet long (which embraces that now described) has one window on either side on the ground floor, and one above each of these. Its cornice is on the same level as that of the recess, but has additional rows of gablets. The roof is also truncated and rises to a height of 8 feet over the main roof.

The recesses, which constitute the principal part of this front, have each six windows in pairs, on the ground floor, and three larger windows over these on the first floor.

The angle projections of 24 feet in length present a precisely similar elevation to that described for those in the south face. There are six chimneys visible on this elevation, and both the ventilating shafts in rear are also seen.

This building is not so irregular in its outline as the Eastern Block, but is in a higher position, and commands, from its western side, a fine view of the Ottawa River and the Chaudière Falls.

Interior Arrangement.—As already stated, the centre entrance on the south front is approached by a flight of outside steps. This leads into a vestibule (20 by 12 feet), in which there are four steps, extending across its whole width. It is floored with encaustic tiles, laid in cement. On the right there is a door to a room occupied by the Department of Public Works. The door to the corridor has side and fan lights, and immediately opposite are two piers and three archways to the stairs leading to the first floor, attic, and also to the basement.

This corridor is 9½ feet wide, and extends along the centre of the whole southern front, and is also continued along the middle of the quadrangle front and the east side of the west wing. These corridors are lighted by windows at their respective ends, and their line is broken by four arches on the south and three on the quadrangle front.

Proceeding westwards from the south centre entrance, the first two rooms on the left and one on the right are occupied by the Public Works Department; the second room on the right is apportioned to the Railway Commissioners; and the remaining rooms on the west end and throughout the west wing (12 in number) are allotted to the Militia Department.

Advancing eastwards from the same starting point, the two first rooms opening off the corridor, on the right, are set apart for the Public Works; the two beyond these are allotted to the Indian Department; and the five rooms on the left are occupied by the Fisheries branch of the Crown Lands, and by the Indian Department.

There are also outside entrances in this front, on the south-east and south-west angles. They are approached by flights of outside steps, but are seldom used for access to the building.

All the rooms on the ground floor, on both sides of the corridor which runs along the quadrangle front (20 in number), are apportioned to the Post Office Department—the Post Master General's room being in the north-east angle.

In the centre of the east front there is a vestibule at the entrance (26 by 12 feet), in which there are three steps, running across its whole width. At the top of these is a door, with side and fan lights, and opposite there are piers and arches, and flights of stairs, similar to those on the south front, leading to the first floor, attic, and the basement.

In the basement are passages corresponding with the ground floor corridors; the rooms in the rear part are similar to those on the floor above. Along the fronts the warm air vaults occupy a portion of the space, and diminish the sizes of the rooms, to which there is access only at points opposite the stairs, and at the ends of the passages.

The rooms are chiefly occupied by the office-keepers of the various Departments, and for store rooms. The floors throughout are of Portland cement laid on concrete. There are three outside entrances in the rear of the building, by flights of steps in the sunk areas by which a large portion of the back part is surrounded.

The boiler-house is situated in the angle formed by the rear lines of the east and south wings. This will be more particularly referred to under the head of Heating and Ventilation.

In the first floor the corridors run immediately over those in the floor below, and their line is also broken by a similar number of archways. The openings at the staircase are also carried up the same as those on the ground floor.

That portion west of the south centre entrance, together with the rooms in the west wing, are occupied by the Department of Public Works. These apartments are 16 in number, that of the Minister being in the centre of the west wing.

The south front, east of the entrance referred to, together with the whole of the east front, containing 31 rooms, have hitherto been occupied by the Department of Crown Lands. In the centre of the east front there is a landing from the stairs below, the stairs being continued to the attic.

There are two stacks of water closets and urinals which are entered from the landings opposite the respective stairs.

The attics of this Block have been fitted up for drafting rooms, and are lighted by a series of skylights on the flat portions of the roof. The two on the south front, which measure respectively 86 feet by 33 feet and 85 feet by 33 feet, are occupied by the Public Works Department, and those on the east front 66 feet, by 34 feet and 63 feet by 34 feet, have been used by the Department of Crown Lands.

There are also rooms in the south-east and south-west angle towers, the floors of which are a few steps below the attic.

Opposite the landing of the stairs from the south centre entrance, there is a narrow stairway leading to Photographing Rooms connected with the Department of Public Works. These are situated in a compartment of the rear, in the higher portion of the roof, and the operating room is provided with a large skylight. The tracery windows in the projections at the angles, and on each side of the entrance doors, on both the ground and first floors, are glazed with quarry lights.

The ground, first, and attic floors are formed of rolled iron joists and concrete, with pine floors in the rooms; the corridors are of Portland cement. The vestibules are laid with encaustic tiles, and the rooms generally have fire places, chimney pieces, wash basins, skirtings, doors and windows and cornices similar to those described in the Eastern Block.

The principal stairs throughout both blocks are of Ohio blue sandstone rubbed. They are 5 feet wide, the ends are keyed into the side walls, and the steps have moulded nosings. They are checked into each other, and the underside presents a fair surface, corresponding to the rise. The balusters are of ornamental wrought iron, with a heavy handrail of oak, which is stopped against the piers. They are generally called " hanging stairs."

Both blocks are provided with safes for the preservation of important documents.

The framework of the roofs is of wood sheeted with grooved and tongued boards; the high-pitched portions are covered with slates arranged in bands of different colors. The decks, or flat parts, are covered with galvanized iron laid on rolls; and the valleys, angles, and flashings are of sheet lead. On the ridges of the roofs are ranges of ornamental wrought-iron crestings; terminals are also fixed on all the towers, gables, dormers, &c. These are painted blue with the prominent points gilt.

HEATING AND VENTILATION.

The mode of heating adopted throughout the buildings is by steam produced in boilers, situated near the centres of the respective blocks, and applied generally on what is termed the " Vault System."

This may be briefly described as consisting of a series of ducts for the admission of external air, over which are constructed, in the interior of the buildings, vaults for steam pipes leading from the boilers. The air enters these vaults through the perforated coverings of the ducts, is heated by coils of pipes, and subsequently passes through openings in the top of the vaults, into the various rooms, &c. On this system the two Legislative Chambers and the central portion of the Parliament Buildings are heated, with the exception of the main vestibule, and the rooms immediately over it. These, together with both the wings, are heated by direct radiation from steam coils, placed in the corridors and various apartments. The other two blocks of buildings are also heated on the Vault System, except a few rooms, where it was considered expedient to place coils for the purpose of heating by direct radiation. In this manner the attics are also warmed.

PARLIAMENT BUILDING.

The principal ducts for the admission of cold air to this Building are as follows: A line of duct runs from an inlet on the brow of the hill, on the west side of the grounds, passing immediately in rear of the wings, and through the centre of the Building to another inlet on the edge of the ravine on the east side, a distance of 840 feet.

From an inlet situated in front of the terrace, a line runs northwards through the centre of the Building to its termination on the brow of the hill in rear of the Library, a dis- of 540 feet.

Parallel to this (and about 90 feet on both sides of it) there are two ducts, one in line with the west side of the House of Commons, and the other in line with the east side of the Senate Chamber.

These are continued northwards from their junction with the main duct east and west, to terminations at the brow of the hill. The mean length of each being about 350 feet. It will thus be seen that there are six inlets for the admission of external air to this Building.

The bottoms of the ducts have a descent outwards from the Building to their respective terminations. Those on the east and west sides, and in line with the Chambers have each a sectional area of about 6 by 3 feet, where they enter the Building, and at their outer ends they have an area of 6 by 6 feet. The central duct from the brow of the hill to the boiler-house, has a minimum area of 10 by 3 feet, and at its northern inlet measures 10 by 6 feet. At the southern end it is about 9 by 4 feet, and is divided into two parts up to the front line of the Building. At a short distance from the terrace inlet there is a branch on each side running diagonally to the angle formed by the wings and central portion of the structure. Connected with the principal ducts are others round the walls of both Chambers, Reading rooms, &c., which are joined by one under the Picture Gallery. There are also lines 4 feet wide along the passages, and around the wing courts which at different points intersect the leading ducts :—and from the former there are several minor branches.

There is also a transverse line passing through the centre of the Library, connecting those running north and south. The whole of the ducts are below the level of the base ment floor.

The aggregate length of those connected with this building is 4,220 lineal feet, or about four-fifths of a mile. Of this length there are 2,611 feet in the interior. They are constructed of masonry faced with dressed limestone. Those portions outside the buildings are arched; in the interior they are covered with flags perforated for the admission of the air.

The inlets at the brow of the hill are finished with cut stone terminations and wrought iron gratings.

Boiler House.—The central court, 74½ by 68 feet, is occupied by the boiler-house, the floor being sunk 10 feet below the basement, and the level of the roof from 4 to 7 feet under the sills of the ground floor windows. It measures 17½ feet in height, and is divided into two compartments by 6 piers and 7 arches, built for the purpose of supporting a tramway, on which fuel is brought in and placed in a position convenient to the furnaces.

This tramway is 8 feet wide, and, together with the side walls occupies a space of 11 feet. The roof is supported by three built girders in the southern division, and by a girder bearing on four stone piers in the northern compartment. It is formed of rolled iron joists with transverse boards for retaining a bed of concrete 12 inches thick. In this fillets 3 by 3 inches are placed to receive the roof boarding, which is covered by galvanized iron laid on rolls.

Light is admitted through four elevated wrought-iron skylights, and by a series of windows in the side-walls of the tramway.

To prevent the galvanized covering being injured, and to facilitate the removal of the snow that falls from the high roofs adjoining, it is sheeted with plank, and the skylights are protected in a similar manner.

The smoke and extracting shaft for downward ventilation is situated in the centre at the north end. It is 15 feet square at the base, and built to a height of 155 feet. The interior opening, is 9 by 9 feet, in which are carried up and secured by cross-bars, two boiler-plate smoke pipes, each 21 inches diameter. The walls of the boiler-house, tramway piers, and the smoke shaft to the height of about 20 feet, are of dressed block limestone.

Along the north end are placed six Cornish boilers, three on each side of the smoke shaft. These are each 20 feet long and 5 feet diameter, built in brick work and provided with cast-iron fronts. They are furnished with steam drums, safety valves, gauge cocks, steam valves, &c., &c., and have been subjected to a cold water test of 100 lbs. pressure to the square inch. They are locked up at 30 lbs. pressure of steam.

The centre arch under the tramway is occupied by a cistern for water from steam condensed in some of the pipes and coils. The arches alongside the walls lead to stairs from the east corridor of the House of Commons, and the west corridor of the Senate Chamber. The other arched spaces are used for the storage of fuel.

In that portion of the boiler-house south of the tramway, are two cast-iron cisterns, each capable of containing 5,000 gallons. These are connected with the water supply (to be hereinafter described) and are intended as a reserve for the use of the boilers. On the east side is fitted up a steam pump calculated to force 200 gallons of water per minute to the height of the roofs of the main structure. This pump is for the purpose of supplying the boilers—and, in case of necessity, of throwing water into the roofs over the Legislative Chambers, with which it is connected by wrought-iron pipes.

The principal lines of cold air ducts, previously referred to, intersect each other in the southern division of the boiler-house, having been formed with a descent, so that they pass under the floor. At this point a fan, 14 feet diameter, has been placed for the purpose of forcing cold air directly into the Legislative Chambers, or into the warm air vaults by which they are surrounded. This fan can be driven at such a velocity as may be deemed expedient, by means of a powerful steam engine, also placed in this division of the boiler house.

Warm Air Vaults.—Over the cold air ducts described as running all round the interior faces of both Chambers, are situated warm air vaults, 5 feet wide and about 10 feet high, arched on top and constructed of brick. The lines of these vaults are intersected at four points by the tramway, which crosses them at a level of 3 feet 6 inches over the top of the duct. At these points the vaults are stopped, and there are entrances to them by iron doors. Through the central portion of the building are warm air vaults, 4 feet wide and nine feet high, connecting with those round the Chambers. There is also another vault leading from the boiler-house under the main vestibule, with branches to the front walls—two on each side of the main entrance.

From the rear line of the smoke shaft there is a warm air vault, 11 feet wide, leading to the Library, which has been built as far as the inner wall of that structure. There are also two lengths of about 20 feet each under the passages leading to the smoking rooms for both Houses.

The aggregate length of these vaults (exclusive of those still to be constructed under the Library) is 926 lineal feet. It may therefore be said, that there are about 1,194 lineal feet of cold air ducts rendered applicable to the Vault System, and about 1,417 feet connected with the wings and other parts of the Building, which are heated by direct radiation from coils. For the latter, flues are carried up in the walls from the cold air ducts to the various rooms and corridors above.

The steam produced in the boilers, is conveyed by steam pipes to the remotest parts of the Buildings, attics and angle towers. Those forming the main lines are of cast iron, and generally 4 inches diameter; towards the extremities they are wrought iron of less size.

Over the boilers a pipe, 6 inches diameter, is carried from east to west and connected with the steam drums. It is diminished to 4 inches diameter at each end, and leads into the warm air vault under the respective Chambers, where it is carried nearly all round them of a similar size.

In the centre of the boiler-house a 6-inch branch runs southward from the main steam pipe, to a point 10 feet beyond the inner face of the wall, where it is divided into two 4-inch pipes, leading right and left into the vaults under the central portion of the Building. From the same point a 2-inch pipe is carried into the vault under the main vestibule, where it branches off into two 1½-inch pipes. Each of these are again branched off into two 1-inch pipes, which are extended to the coils in the front of the Building, immediately under the ornamental arched openings in the main walls, on each side of the central entrance.

The leading pipes are, in all cases, placed immediately over the perforations in the covering of the cold air ducts, so that the entering current is at once subjected to the action of heat. The temperature of the air is further increased by the large heating surface of numerous coils, placed in the upper portion of the vaults. These are generally composed of four rows, and eight in width, of 1-inch pipe (or between 700 and 800 lineal feet each), laid to a gradual inclination. The highest part of each coil is connected with a vertical feed from the leading steam pipes, and at the lowest point it has a branch to the return pipes, the latter being, in every case, of equal capacity to the main steam pipes, and laid on the opposite side of the vaults. The coils are placed about 2 feet apart, and occupy nearly the whole length of all the warm air vaults.

It will be evident, that the steam, after having circulated through such a length of pipe, has lost a considerable portion of its heat by radiation, so that at the point of junction with the main return pipes, there is a quantity of water. This descends into that portion of the pipe which runs along in front of the boilers, below the level of the floor, and is connected with them by branches and valves, for the purpose of admitting the water, which (by the operation of gravity, combined with the pressure of unexhausted steam in the pipe) enters when the pressures in the main return pipes and boilers are nearly alike.

In the arches over the vaults around the Chambers, there are numerous openings for the exit of warm air. From these flues are carried up in the side walls, and the air is admitted to the Chamber by the line of perforated brass gratings, 6½ feet over the floor of the House. This can be so adjusted as to regulate the supply. Air also passes through the ornamental grating under the gallery fronts.

The other portions of the Building, which are heated on the Vault System, have flues conveying the warm air directly to registers in the various rooms.

The system of heating by box coils is applied principally to the wings. The main steam and return pipes are extended from the warm air vaults, and raised nearly to the basement ceiling, and from these branch pipes run up in the flues from the cold air ducts to the coils in the various rooms, passages, &c., on the upper floors.

The cold air flues have, in all cases, an opening behind the coils, which are of different sizes—placed in recesses cut in the walls—and have in front cast-iron screens for the admission of warm air. There are also branch pipes from the ends of the vaults along the front portion of the wings and part of the rear, and one descending branch from the ceiling, which heats several of the basement rooms, in rear of the wing. These connect in a return pipe in the vault, which is carried separately to a tank in the boiler-house. Similar arrangements are adopted for heating the dining-rooms, closets, &c., in that portion of the basement alongside both Houses. Steam pipes are also carried up to, and along the attics to the angle towers, where coils are placed in the tank rooms, for the purpose of preventing the water freezing during winter. Coils of steam pipes are also placed in the ventilating towers, at the north end of the Chambers, to increase the upward draught.

Ventilation.—Two modes have been adopted for the ventilation of the Chambers, one termed the "Upward System," and the other the "Downward System."

The latter provides for drawing off the vitiated air near the floor, through perforated gratings, in the risers of the platforms, on which the Members' seats are placed. These gratings open into spaces between the arches under the floors of the Houses, which are connected at several places with foul air ducts running around the Chambers in the basement passages. These ducts are all joined at the north-east and north-west angles of the respective Houses, and from thence extended, so as to enter the main extracting shaft, at a level of 7 feet over the boiler-house floor.

The air in the shaft being rarefied by the heat of the iron smoke pipes, an upward draught is created, by which the foul air is rapidly extracted through the ducts from the Chambers, and escapes through the side openings formed near the top.

The "Upward System" may be described as consisting chiefly of a series of small ventiducts, arranged along the ceiling, and leading to others at the sides, of larger capacity, with openings into the ventilating shafts, situated at the north ends of the Chambers.

Over the ranges of quatre-foil openings, between the panelled work of the ceilings, are placed semi-circular ducts, 11 inches diameter, running from north to south, and joined to others (extending from east to west), 15 inches wide, 9 inches high at the centre, and 18 inches high at the sides. The latter are connected with large triangular ducts, formed in the roof on each side, leading directly into the outlet shafts. In the shafts are steam coils for the purpose of rarefying the air, and producing a current through the various ducts to the towers and other openings at the top.

The two systems above mentioned are in effective operation in both Chambers. In the House of Commons, there is, however, additional means of upward ventilation provided, by the insertion of cast-iron perforated gratings in eight of the centre panels of the ceilings over the galleries. These communicate with large ventiducts leading to the shafts, and constructed under the roof on each side of the Chamber.

All the main ventiducts have doors near their outlets for regulating the draught, and the gallery ventilation is separated from that of the Chamber by a vertical partition in the shaft, to guard against cross currents. In the other parts of the Building, (whether heated on the vault or coil systems), ventilation is effected by means of registers placed near the floors and ceilings of the respective rooms and corridors. These registers open to flues communicating with galvanized iron ventiducts, increasing in size from 7 to 26 inches diameter as they approach the ventilating shafts, and are joined by flues from the numerous suites of rooms. The shafts are situated alongside the Committee stairs, and in the angle formed by the rear line of the wings and the walls of the Chambers. The Picture Gallery is ventilated by a flue formed for that purpose in a chimney at each side.

DEPARTMENTAL BUILDINGS.

The mode of heating adopted for these buildings is, as already stated, with a few exceptions, on the Vault System—external air being introduced through a number of ducts below the level of the basement floor.

Eastern Block.—The cold air ducts for this Block are generally 3 feet 9 inches wide, and 2 feet 3 inches high, and are constructed of dressed limestone, with a covering of flags, in the interior of the building: those outside are chiefly of a good class of rubble masonry, arched over. They are of different shape to those inside, but of a larger sectional area. There are three inlets on the quadrangle front; two on the south front; one on the east front; and five in the rear. In all, eleven in number.

The six front inlets are immediately alongside the front walls of the building, where they have small cut stone terminations, with vertical iron gratings.

The three ducts in rear of the south and west fronts meet at a point 75 feet north of the Agricultural wing. From thence they are continued northward to the brow of the ravine, near which point they are joined by two others from the north end of the building. The whole then form one group—but each duct is carried separately throughout—and they have a cut stone termination with wrought-iron gratings, &c. Their aggregate length is 2,215 feet, of which 945 feet are in the interior of the building.

Boiler House.—The boiler-house measures 31 × 42 feet, and is situated in the angle formed by the rear line of the west and south portions of the building. It is entered by a door from the area in the rear. From this there is a flight of steps down to the floor, which is sunk 10 feet below the level of the basement, and is paved with dressed limestone. The walls are carried up 21 feet high, of dressed block limestone, and the roof is formed of rolled iron joists, upon the lower flanges of which transverse boarding is laid, supporting a bed of concrete 10 inches thick. In this are imbedded 3 × 3 inch fillets, and upon these the roof boarding is nailed, which is covered by galvanized iron laid upon rolls. The whole is supported by built girders resting on the walls.

The roof has a slight inclination towards the north, and light is admitted through an elevated wrought-iron skylight.

In the south-east angle of the boiler-house there is a smoke flue and ventilating shaft carried up to a height of 100 feet over finished surface, 11½ feet square, with an inside opening of 6½ feet square. In this is a brick flue, 18 inches diameter inside, carried up to the level of the attic floor. From this point to the top there is an 18-inch boiler-plate pipe. From the boiler-house two underground flues, 2 feet diameter, are connected with the ventilating shaft in rear, opposite tne south entrance. In this an 18-inch brick flue is also carried up to the level of the attic, and from thence an 18-inch boiler-plate pipe to the top.

There are two Cornish boilers, 20 feet long and 5 feet diameter, built in brickwork, and fitted up with all the requisite apparatus. They have been tested to a pressure of 100 ℔s. to the square inch, and locked up to a pressure of 30 ℔s. of steam. They are provided with ornamental cast-iron fronts.

Fuel is supplied through an opening in the east wall, a little over the surface of the ground.

In the north-east corner is placed a wrought-iron tank into which the draw-off from the steam pipes is discharged. Alongside of this is a steam pump for supplying the boilers. In a room adjoining the boiler-house there is a wrought-iron tank capable of holding 5,000 gallons, fed from the water supply pipes.

Warm Air Vaults.—In front, and alongside of the basement passages in the south and west portions of the building, is a line of warm air vaults, 4 feet wide and 484 feet long. This is however, interrupted by two passages to the front basement rooms, one 7 feet, and the other 4 feet wide. Where the line of vaults is thus broken they are provided with iron doors at each end.

Under the narrower corridor of the Agricultural wing there is a vault 67 feet long and 4 feet wide. Between the basement passages and the rear of the building near the several stacks of closets there are also three short lengths of vault, about 22 feet each. At the north end there is an extension of the main vault, 62 feet long, which reaches to within 16 feet of the east end of the wing. The total length of vaults is about 680 feet. They are built of brick, arched on top, and generally about 9 feet high.

Four-inch steam and return pipes are laid above the perforated covers of the cold air ducts along the whole length of the main vault. From these pipes of smaller diameter are extended in the branches at the Agricultural and north wings, and the short lengths leading to the water closets. In all cases the return pipes are of the same capacity as the steam pipes, and the vaults are supplied with a series of coils arranged in a similar manner to those described for the Parliament Buildings.

Steam is supplied to all the latter through a 4-inch pipe which runs across the north ends of the boilers, and is continued in the same line, to an arched way, and thence to a connection in the main vault, at a point about 34 feet north of the main tower. The return pipe at the boiler-house is dropped below the level of the floor, and carried along in front of the boilers, with which it is connected by two stand pipes having regulating valves.

The basements are heated by pipes leading from the mains, and communicating with coils in the different rooms. The returns from these lead into the main return pipes.

There is a separate 2-inch steam pipe carried up alongside the north wall of the main tower, for the purpose of heating the large model room on the south front, and other attic rooms on the quadrangle. This is also extended to heat the tank rooms, in the towers.

In the arches of the warm air vaults, are openings, communicating with flues in the walls, which conduct the warm air through registers into the various front rooms and corridors above.

Heated air is also conveyed, by means of galvanized iron pipes, across the passages in the basement, to flues in the corridor wall, which lead to the rooms in the rear portion of building.

The rooms in the Agricultural wing, to which the Vault System does not fully extend, are warmed by means of horizontal and box steam coils.

VENTILATION.

The various rooms on the quadrangle front are ventilated by flues, 8½ by 8½ inches, carried up in the walls and having registers situated at the floors and near the ceilings. These flues lead into a series of 9-inch earthenware pipes, laid along the attic floor, communicating with the arched brick ventiduct, 9½ feet by 3 feet 9 inches, over the western corridor. This discharges at its southern end into the ventilating shaft at the south-west angle of the boiler-house. The rooms in the north wing have similar pipes leading into the north end of the ventiduct. The south front is ventilated from each end, towards the centre, the main duct over the corridor being divided by a partition wall opposite the ventilating shaft in the rear, at the south entrance. From this point, two separate arched branches lead into the shaft. The pipes from the flues to the north portions of the ventiduct are of earthenware, and 9 inches diameter. The pipes are in all cases laid so as to join the ventiducts in the direction of the escaping foul air current. Those from some of the rooms lead into chimneys which are provided with separate flues for that purpose.

WESTERN BLOCK.

The cold air ducts for this Block have two inlets on the south front; one on the west; and five in the rear: nine in all.

Those in the front consist of plain openings in the area walls, provided with gratings; except that on the west side, which has a cut stone termination. The three in rear of the quadrangle front meet at a point about 40 feet from the building, and are continued in a westerly direction to the brow of the hill, where they form one range in the termination. The other two are carried to the same point, and immediately over those just mentioned, and form a second range at a higher level. At the edge of the hill they are finished in dressed block limestone, and furnished with wrought-iron gratings.

In the interior, the main duct runs along near the centre of the building for the whole length of the south and west sides; from which branches lead off to the several inlets.

The aggregate length of the ducts is 2,564 feet—of these 842 feet are in the interior. They are 3 feet 9 inches wide and 2 feet 3 inches high, with sides of dressed limestone covered with flags in the interior and arched over outside the building.

The boiler-house is 40 feet square, and situated in the rear angle formed by the west and south portions of the block. It is sunk to the same depth below the basement floor, similarly roofed and fitted up as that of the Eastern Block, with the exception that there is one built girder, which is supported by two cast-iron columns. There are two Cornish boilers, 20 feet long and 5 feet in diameter, with all the requisite apparatus for regulating the supply of water and steam. The warm air vaults are 570 feet in length, of the same sectional area, and with steam coils fitted up in them in like manner as described for the Eastern Block.

The steam pipes are arranged, and the heating of the basement, attics, and tank rooms in the towers is effected in the same way as in the Eastern Block.

There is also a smoke and ventilating shaft in the angle of the boiler-house, and another connected with it by underground flues. This is situated in rear of the west front, near its north-west angle.

The warm air flues and flues for ventilation are carried up in the walls. The latter connect with numerous 9-inch earthenware pipes, leading into arched brick ventiducts constructed over the corridors, and communicating with the ventilating shafts in the same manner as already described for the other Block.

The lengths of the various cold air ducts, warm air vaults, flues, pipes, &c., connected with the heating and ventilation of all the Buildings are, approximately, as follows:—

Cold air ducts...	8,999 lineal feet.
Warm air vaults..	2,186 "

Cold and warm air flues	8,568	lineal feet.
Flues for ventilation	19,224	"
Chimney flues	18,600	"
Arched brick ventiducts	800	"
Galvanized iron and earthenware ventiducts	11,938	"
Cast-iron pipe, 6 and 4 inches diameter	4,400	"
Wrought-iron pipe, 1 inch diameter and upwards	111,000	"

DRAINAGE.

The main drains from all the Buildings discharge into the Ottawa River at three points, at the northern base of the hill. They are sunk so as to drain the respective boiler-houses, which, as previously stated, are 10 feet below the level of the basement floors. This unavoidably entailed deep cuttings in rock of irregular strata and difficult of excavation. The upper portions of the trenches were, however, used as a channel for the cold air ducts.

Parliament Buildings.—The main drain runs westward from the boiler-house, passing in rear of the wing, and immediately under the cold air duct, to the brow of the hill, a distance of 355 feet. It is 4 feet 6 inches high, 3 feet wide, arched on the top and bottom, and built of cut block limestone. All the pipe drains from the various stacks of water-closets, wash-basins, &c., on the west side, empty into this drain near the north west angle of the wing. It is continued down the steep face of the bank to the margin of the river in a cast-iron pipe, 268 feet long, 12 inches diameter, where it joins a wrought-iron tube, 22 feet long, built into a crib sunk at short distance from the shore. This crib serves to keep the pipe clear and protect it from injury by ice or otherwise. The eastern side is drained by a number of pipes leading from the various closets, wash-basins, &c., which connect with a leading earthenware pipe, 12 inches diameter. This is carried to the brow of the hill and joins the main drain from the Eastern Block.

Eastern Block.—The main drain from this Block runs eastward from the east side of the house a distance of 65 feet, where it is joined by a branch 87 feet long. From this boiler-point it is continued northward under the line of one of the ducts to the brow of the hill. It is 432 feet long, 4 feet 6 inches high, and 2 feet 6 inches wide, built of cut block limestone, and arched both at the top and bottom. Into this the various pipe drains from the closets, wash-basins, &c., are emptied at several points. From the brow of the hill it is continued in a brick barrel drain, 2 feet diameter and 720 feet in length, to the river, where it is joined to a boiler-plate tube of the same diameter, the end of which is built in pier-work carried out to deep water.

In addition to this, there is a surface drain, running from the north end of the Block along the west and south fronts, with connections from the several areas. This drain is continued out to the east brow of the hill, and thence downwards along the face of the ravine to a junction with the 2-feet barrel drain above mentioned, at a point 85 feet from its commencement.

Western Block.—The principal drain for the Western Block runs out of the north side of the boiler-house, and turns toward the west, whence it is continued to the brow of the hill under the line of one of the cold air ducts. It is 367 feet long, built and of similar dimensions and class of masonry as that for the Eastern Blocks.

All the drains from closets, wash-basins, &c., discharge into this in rear of the building. From the brow of the hill to the river it is continued in a brick barrel drain, 2 feet diameter, 476 feet in length, the end of which is united to a wrought-iron tube built into a crib sunk in the river at a distance of 56 feet from the shore.

There are also surface drains carried nearly all round this Block: they are connected with the several areas, and discharge into the main drain at two places in rear of the building.

Along the terrace in front of the Parliament Building (which has an inclination outwards), at a distance of about 20 feet from the top of the slope, a water-table of dressed stone has been laid. This is for the purpose of carrying off the surface water to gratings at each end, from which earthenware pipes convey it into the drains on the west and east sides of the grounds.

A similar water-table, but of larger dimensions, has been laid across the quadrangle, in line with the southern fronts of the Departmental Blocks. This takes the surface water from the square, and discharges it into the drain that passes along the southern front of the Eastern Block.

GAS SUPPLY.

In 1865, a contract was entered into with the "Bytown Consumers' Gas Company," for the supply of the Illuminating Coal Gas required for all the Public Buildings, for a period of ten years; the Company being bound to lay down an 8-inch main from their works to the entrance to the Government grounds, and to furnish the gas in such quantities as might from time to time be required, the same to be measured at the Buildings by meters provided by the Government.

The main enters at the gate, opposite Elgin street, and is carried directly (a distance of 110 feet) into a meter room, fitted up alongside the main tower of the Eastern Block, where all the gas used is measured. For this purpose, a large dry meter has been provided, and placed, capable of registering the full quantity of gas that can pass through an 8-inch pipe.

The exit pipe is also 8 inches diameter, and is continued of this size 67 feet westward, or nearly on a line with the quadrangle front of the Eastern Block, where it is divided into three branches, one 4-inch branch 75 feet long, leading back to the Eastern Block, and another 4-inch pipe is continued across the quadrangle, a distance of 738 feet to the Western Block. The centre pipe is 6 inch diameter, and is laid through the square on a curved line to the Parliament Building, a distance of 716 feet, where it enters the meter room described as being in the basement, west of the main vestiuble.

At about 160 feet south of this, a 4-inch branch sweeps round to the meter room on the Senate side, a distance of 240 feet. From this 4-inch branch a 2-inch pipe leads off to the eastern side of the Building, and is continued along the south front, and around the east end to the Speaker's entrance. A 2-inch pipe also leads westward from the 6-inch pipe above mentioned, and runs around the west end to the Speaker's tower on the Commons side.

These 2-inch pipes are used solely for the purpose of lighting the outside entrances, and have no connection whatever with those in the interior.

In each of the meter rooms above mentioned, a 1,000-light dry meter has been fitted for registering the quantity of illuminating gas consumed in the Offices and Chambers, occupied by the respective branches of the Legislature.

On the Commons side, the exit pipe is 6 inches diameter, and within the room is divided into four branches, one of these (2 inches diameter) is for supplying the gas lights around the corridors, and the small lights in the angles of the Chamber. In addition to this, however, on the Senate side it supplies light for the Bar, and standards on each side of the Throne. Another (2 inches diameter) is conducted towards the Library, but at present it is only used to light one half the Picture Gallery and Smoking rooms, together with some rooms in the basement. The third branch (3 inches diameter) is carried to the ceiling of the Chamber, for the purpose of supplying the gaseliers by which it is lighted.

The fourth branch is also 3 inches diameter, and supplies the Post Office, Waiting, and other rooms in the central portion of the Building on both floors. It is carried along the ceiling of the basement passage, to a point under the west corridor of the House, where it is divided into two 2-inch pipes, one of which is continued northward, and supplies light to the Saloon, Dining Rooms, and closets in the basement. From this branches lead up to the Wardrobe, Speaker's rooms, closets, Reading room on the ground floor, and also to the Reporters' rooms above. The other 2-inch pipe is for supplying the wing, and is carried along the basement passages, diminishing in size as it approaches the west end of the Building.

The smaller pipes for supplying the rooms and corridors above are carried up from this in chases cut in the walls, and are led off between the concrete and floor to the centre of the rooms for pendants, and to the sides for brackets.

The gas fittings in all the rooms are of the best descriptions manufactured for general use. Those in the Chambers and vestibule, however, are plain ring burners, formed of wrought-iron pipe, and intended to serve until arrangements are made to provide others of a more suitable kind.

Eastern Block.—As before stated, all the gas supplied by the Company is measured in the main meter room of this Block; and is immediately led out of the building in a pipe of the same size as the supply main.

The gas for this Block re-enters by a 3-inch pipe, and is carried up near the north-east angle of the main tower, where there is a 100-light meter placed for registering the consumption. The 3-inch pipe is continued vertically to the attics, and from it branches lead along the south and west corridors and attics, diminishing in size as they approach the east and north ends of the building.

Those in the corridors are imbedded in the concrete, and laid with an inclination.

In the ground floor they are 1½ inches diameter, where they lead off from the main pipe. These supply the various basement rooms and passages, together with the boiler-house. Those on the first floor are 2 inches diameter, with branches laid for brackets in the various rooms and corridors, and for pendants in the principal apartments.

On both the ground and first floors these pipes are laid on that side of the corridor next the rear of the building.

The branches carried along in the attic supply the various rooms and corridors on the first floor, the model and other rooms in the attics, and the various apartments over these, in the Agricultural wing.

From the 8-inch exit main a 2-inch branch is led along the south front of the building, and round the east end to the entrance to the Agricultural wing. From this it is continued 1½ inch diameter for a distance of 55 feet.

From the 4-inch pipe (diminished to 3 inches before entering the wall) which supplies this Block, a 2-inch pipe is carried along the west front to the Governor General's porch, where it is diminished to 1½ inches, and extended to the north end of the building.

These outside pipes are for the sole purpose of supplying gas to the lamps at the various entrances.

Western Block.—From the 4-inch pipe for this Block above referred to, a 2-inch pipe is carried along the quadrangle front to the entrance porch; from thence it is extended 1½ inches diameter to the north end of the building.

There is also a 2 inch pipe leading along the south front to the centre entrance, where it is reduced to 1½ inch, and is extended to the west end. These pipes are for supplying the lamps at the different entrances.

The 4-inch pipe which is carried across the square, is reduced to 3 inches where it passes through the east wall of the south-east angle tower.

In a room adjoining this, there is a 100-light meter for measuring the gas consumed.

The supply pipe is carried up vertically to the attics, and from this branches are imbedded in the concrete floors along the sides of the corridors next the rear of the building.

There are also branches in the attics. All the pipes are of like dimensions, and laid in a similar manner to those in the Eastern Block.

The position for brackets in the various rooms have been arranged to meet the views of the Heads of Departments, but no gas fittings have as yet been provided for either the Eastern or Western Blocks.

As already stated the pipes for supplying gas to the entrance lamps lead directly off the mains outside, and have no connection with those in the interior of the different Buildings. The gas thus consumed, is therefore only registered by the main meter, and its cost should be apportioned to the respective branches of the Legislature, and the two blocks of Departmental Buildings.

BELLS.

The system of bells originally contemplated, was that in ordinary use, rung by means of pulls, cranks, and wires. This, although advantageously applied to houses of moderate size, constructed in the usual manner, was, after mature consideration, believed to be wholly unsuitable for structures of the magnitude and character of the Public Buildings.

The chief objections being the great distances the rooms were apart between which communication had necessarily to be established; the circuitous route the wires would in many cases have to be carried, and the difficulty of making passages for them, through the floors and walls, together with the numerous cranks required. It therfore appeared evident, that bell wires from 200 to 300 feet long (which they must frequently have been), would stretch so much by an ordinary pull as to render cranks of the usual size, wholly inefficient. It was therefore recommended, that a system of Electric Bells should be adopted, as they had been extensively used in large buildings elsewhere. This was approved, and subsequently carried out.

This system is operated in two ways, viz.: on the Indicatory principle simply, and on the Indicatory and Repeating principles combined.

In either case a galvanic battery, of the necessary strength for the service which it has to perform, is employed, with wires connecting the various apartments, and leading to indicating boxes and bells, placed in the different messengers' rooms.

The complexity of the Indicatory and Repeating system, as well as the great expense of carrying it out, led to the adoption of the simple Indicatory system for all the Buildings.

The latter may be briefly described as follows:—

The electric fluid is supplied by what is termed the Daniell Battery.

This consists of a glass vase, or jar, a cylinder of zinc, a porous cell, and an inverted glass globe, filled with sulphate of copper and water. In the neck of this is placed a cork, with a gutta percha tube, that dips into the porous cell, and serves to keep up the strength of the solution by which it is filled.

The cells are joined together in such numbers by strips of copper, as to produce the strength required.

From the positive pole of the Battery, a wire connects with the "call buttons" in the various rooms; from each of these a wire is carried to the "Indicating Box," which is an apparatus employed to render one bell available for a number of rooms. When the current is sent through this, an armature is attracted, the Indicator is released, and falling forward, projects out of the box, immediately alongside of a number corresponding to that of the room from which the signal is given.

The "call buttons" are used for the purpose of completing the electric current When the button is pressed upon by the finger a spiral spring is forced down and comes in contact with a metal plate fixed upon its under portion. The conducting wires are screwed to two points which serve to fix the spring and the metal plate. This action at once connects the two conducting wires, and the current passes onward to the indicating box.

When the indicator falls forward, as above described, it connects with a wire, by which the current is continued to the bell, which rings as long as the finger is pressing down the call button. The bells are termed "trembling," from their action being continuous as long as the current passes through them.

Thus one current from the positive pole, when the wires are connected at the call button, releases the indicator, rings the bell, and is returned to the negative pole of the battery.

The system above described is that for which the apparatus was furnished by the manufacturers, and is applied to the various rooms and offices in the Parliament Building. In the course of fitting it up, however, Mr. Hutson, the person employed for that purpose, discovered an ingenious method by which the bell is kept ringing as long as the indicator remains fallen, instead of ceasing when the pressure of the finger is removed from the call button, as above stated. This is effected by means of a second group of cells, the wire from which passes along the rear of the indicating box, and is immediately returned through the bell to the battery.

When the indicator is released by the current through the call button, it falls forward and the tail piece presses upon a spring, by which both poles of the second battery are connected, and that current is completed. Until the indicator in its put back place, the bell, consequently, continues to ring by the action of the second current.

The advantage of this method is, that should the person in charge of the indicating box be absent when the signal is first made, his attention is at once drawn to it on his return by the continued ringing of the bell, which, under the improved system, is effected by a single pressure upon the call button.

This, when fitting up the apparatus, was applied to both Blocks of Departmental Buildings.

PARLIAMENT BUILDINGS.

As above stated, the simple system, in which only one current is used, is applied to this Building.

The battery for the Commons side is situated in the meter room, west of the main vestibule, and is generally made up of twenty-four cells. From this, wires from both poles are carried up to and pass along the attics. The positive wire has branches extending to call buttons in all the different rooms, and from every call button a separate wire is carried to an indicating box. From each box, a wire passes to a bell, and thence to the leading wire, which connects with the negative pole of the battery.

In the west end of the Building, there is a box with seven indicators, for the Sergeant-at-Arms' apartments. There is also one in the basement, on the north side, for the chief messenger: this has five indicators.

The principal indicating box is in the messengers' room, which is in the basement and adjoining the meter room, and is arranged for 62 indicators, of which 40 are in use. These lead from the reading-room, Speakers' apartments, wardrobes, committee rooms, and clerks' rooms throughout the west half of the Building.

The battery for the Division bells is placed in a room under the South end of the Chamber; it is composed of from 40 to 60 cells, according to the state of the atmosphere and temperature. From the poles of the Battery there are two positive and two negative wires.

The two positive wires are led at once to the Sergeant-at-Arms' seat in the House, where a small lever is provided, on turning which the current is established, and the bells continue in motion whilst the lever is retained in an inclined position.

One pair of wires passes into the basement saloon and dining room, thence up to the reading room and Library; on this current are placed five of the division bells.

The other pair passes through the saloon, and is carried to the smoking room and wardrobe, thence into the ground floor corridor of the north-east angle of the wing court; from this it is continued up to the first floor corridor. On this current are also placed five bells, making in all ten division bells, rung by two separate currents from the same battery.

The battery for the Senate division bells, is situated under the south end of the Chamber. From this the positive wire is brought up alongside the south porch, where a connection of the current is made by the Sergeant-at-Arms moving a small lever. The wires are then continued to bells in the reading room, wardrobe, and corridor on the ground floor, in all four division bells placed on this current.

The arrangement for the other bells are similar to those on the Commons' side, with the exception, that the messengers' room (in which the principal indicating box is situated) is on the ground floor, instead of the basement. This box is arranged for 62 indicators, of which 32 are in use.

There is also a box with seven indicators for the Gentleman Usher of the Black Rod, and one with five indicators for the House-keeper.

DEPARTMENTAL BUILDINGS.

Eastern Block.—For this Block there are two batteries, situated in the attic, near the main tower, each of these being formed of ten jars.

One set is used for throwing out the indicators, and the other for the purpose of keeping the bells in motion, on the improved system before described.

From the first battery, wires branch off to the north and east ends of the Block (the positive wire being connected with the call buttons), with return wires to the several indicating boxes and bells, and leading to the negative pole of the battery.

From the second battery a pair of wires is carried through the indicating boxes and bells.

The indicating boxes have been fitted up in this Block, as follows, viz :—

Finance Minister's Department,		one Box,	13	Indicators.
Customs Branch,	do	do	8	do
Provincial Registrar,	do	do	5	do
Receiver General's,	do	do	8	do
Bureau of Agriculture, ground floor,		do	2	do
do	first floor,	do	10	do
Provincial Secretary's Department,		do	12	do
Attorney and Solicitor General West,		do	5	do
Governor General's rooms,		do	6	do
Attorney and Solictor General East,		do	4	do
Executive Council,		do	7	do

Western Block.—The batteries for this Block are situated in the attic, over the south centre entrance. They are formed of a like number of jars, and the connections throughout are similar to those of the eastern Departmental Building.

Indicating boxes have been provided and fitted as follows, viz. :—

Post Office Department,		one Box,	7	Indicators.
Indian,	do	do	7	do
Militia,	do	do	9	do
Public Works,	do	do	20 (18 in use)	do
Crown Lands,	do	do	16	do

Electric bells have also been provided for the entrance doors to all the Buildings. These are connected with the batteries in the respective Blocks.

For bell service there has been used about sixteen and a half miles of wire.

WATER SUPPLY.

As the best means of supplying the Buildings with water, appeared to be by pumping from the river in their immediate vicinity, it was decided, after a careful examination of the locality, that the most advantageous site for the necessary work would be on the river's edge in the rear of the Library, where the point stands furthest out into the current, and the purest water would most likely be obtained.

The cliff being at almost all parts steep to the waters' edge, except at one place, where there was a small surface of flat rock, at a level of about 9 feet above low water, this was selected as the best position for the engine-house.

The river has here a maximum variation of about 24 feet, between its highest and lowest stages; and it was, of course indispensable that the pumps should be so arranged as to be accessible during periods of highest water.

To avoid excavating into the face of the hill, which would have been both unsightly and expensive, it was decided to place the river front of the engine-house, only 14 feet back from the line of low water mark, and carry up the foundation walls to the required height.

For the purpose of admitting water into the receiving well, which is situated under the north part of the engine-house, a trench 8 feet wide was excavated in the solid rock, to a depth of 6 feet under low water line, and carried out to deep water in the river.

On each side of the trench for 15 feet from the front of the engine-house, walls are carried up, and the space between them arched over. Immediately outside of this, lines of cribwork are carried on either side, and the space over the trench covered with timber. At the outer end is a coarse rack to prevent any large pieces of floating timber from entering. Where the stone arch ends, another rack is placed across the trench, the openings being only ⅝ of an inch between the vertical bars of which it is formed.

Inside the stone arch, and under the front line of the engine-house, there is a filter 6 feet square, formed of two sheets of finely perforated copper, placed 2 feet 3 inches apart, and stayed by angle pieces of brass. This is divided horizontally into four compartments in height. The entire space is filled with clean gravel—the divisions being for the purpose of lessening the great pressure which there would otherwise be at the base. All the water entering the receiving well passes through this filter.

Means are provided for shutting off the water, at a point outside of the fine rack, when access can be had from the receiving well to the covered way, in which the filters, &c., are placed.

During the season for running timber, these outside works are submerged; a strong boom has therefore been provided, and moored in such a position, as to effectually protect them from injury by rafts, &c.; this also serves to keep the entrance clear from pieces of floating timber.

The engine-house is 36 feet square inside, and is divided into two portions by a wall running east and west. In the north compartment the two pump wells are situated. They are 9 feet long, 3 feet 3 inches wide, and 12 feet 6 inches deep. In each of these is placed a double acting, force and lift pump, 6 inches diameter, and 2 feet stroke. The suction pipes are carried under arches through the walls, and dropped vertically into the receiving well, the ends being furnished with large copper roses. The well is accessible either directly from the top, or by means of a stair leading down to it inside of the building.

The exit pipes of the pumps are carried to a cylindrical air vessel, 2 feet 6 inches diameter, and 13 feet high, placed on a foundation of solid masonry, carried up alongside the west wall. This vessel serves, by the reflex pressure of the air contained in its upper portion, to equalize the flow through the main, and prevent damage by sudden jars or shocks to the machinery.

On the exit pipes are stop valves, which permit of one or both of the pumps being used, as may be required.

Immediately outside the air vessel, a reflux valve has been provided and fixed, which relieves the pumps from back pressure when not at work. A 2-inch pipe is led from the underside of the main (just outside the reflux valve), for the purpose of emptying it; on this is placed a safety valve, weighted to about 90 lbs. to the square inch, so as to permit escape of water, should the pressure in the pipe exceed that due to a column of 210 feet high.

The pumps are driven by steam power. For this purpose a horizontal high-pressure steam engine has been fitted up in the southern division of the house. This engine has

14-inch diameter of cylinder, and 30-inch stroke, with a strong cast-iron bed plate, resting on a foundation of dressed block limestone carried up from the rock. It is provided with all necessary valves and fittings complete, and connected with a locomotive boiler formed of ⅝-inch iron plate, containing seventy-nine wrought-iron tubes of 3 inches diameter and 10 feet long, with a fire-box 6 feet by 4 feet 6 inches. This boiler has a proper steam-chest, safety-valve, gauge-cocks, &c., and was tested by a pressure of 150 lbs. to the square inch. It is connected with the smoke-shaft by a flue 2 feet square, lined with firebrick.

The pumps are geared down so as to work at one-fourth the number of strokes of the engine, with which they are connected by a shaft 5 inches diameter, running north and south, and having two cranks, to which the pump rods are attached.

At the north end is a small reserve engine, with double cylinders, each 7½ inches diameter and 12 inches stroke. This can be connected with the shaft, and is capable of working one pump easily. Each engine has a separate smoke shaft carried above the level of the engine-house roof. The side walls of the building are about 12 feet high, and the ends are carried up with gables, in which are circular openings for the admission of air. The roof is covered with galvanized iron, and entrance doors 6 feet wide have been provided for each division of the structure, together with windows for lighting the interior.

From the engine-house the rising main, 6 inches diameter, is carried obliquely up the face of the hill, in a trench averaging over 5 feet in depth, to the top, where it curves and runs nearly straight to the west end of the Parliament Buildings. It is then carried into a room in the basement of the north-west angle tower, where there is an arrangement of valves, curved pipes, &c., by which the supply to the several Blocks is regulated.

From this room the rising main is continued vertically to the tank in the roof of this tower, and empties over the side through a curved, wide mouthed, end piece. The height of the point of discharge over the valves of the pumps is about 210 feet; this being the elevation to which the water is forced.

The lift varies according to the fluctuation of the river, and has so far never exceeded 21 feet.

From the principal receiving tank, a small lead warning pipe is returned in the same trench as the rising main, and shews at the engine-house when the tank is full; the overflow being discharged into the main drain by a 6-inch pipe carried up in the centre of the tank.

PARLIAMENT BUILDINGS

The tanks are situated in the six angle towers, as high as the roofs will permit. They are 16 feet diameter at top, 15½ feet at bottom, and 9½ feet high; except the main receiving tank, which is 10½ feet. They are constructed of heavy boiler-plate iron, well rivetted together, rendered perfectly watertight, and thoroughly painted. Brick arches have been built, springing about 18 inches above the attic floor, and tied together to prevent thrust on the tower walls. Upon these are floors of rolled iron joists and concrete, with an upper coat of Portland cement. On this the tanks are placed, and channels formed around them to carry off the water condensed on their outside surfaces during warm weather. All the tanks are connected by 4-inch pipes, and thus form one reservoir; but, at the same time, are so arranged that any one can be emptied without interfering with the rest. Each is provided with a stand-pipe (generally used as an overflow), which can be removed, and its connection at the bottom then serves as a drain.

As each tank is capable of holding about 12,500 gallons, their aggregate capacity is over 75,000 gallons.

From the basement room above referred to, a 4-inch pipe leads to the Western Block, and one 6 inches diameter is continued to a similar room in the east end of the Building, from whence it is carried up vertically to the tank in the north-east angle tower. There is a 4-inch branch from this, joined to a descending pipe from the tank, continued to the Eastern Block.

These three leading pipes are all so arranged that they can either be used for pumping directly into the different tanks, or (as is usually the case) supply those with which they connect by gravitation from the principal one in the north-west angle tower.

The tanks in the north-west and north-east angle towers are connected by a direct line of 4-inch pipe running the whole length of the Building. All those at the respective ends are also connected by 4-inch pipes which join on to this continuous line.

From the receiving tank a line of 2-inch pipe diminished to 1½-inch is continued southward, with 1-inch branches, for the supply of the rooms and closets on all the floors of the west end of the Building. From the tank in the angle tower of the wing, adjoining the Members' entrance, a 2-inch pipe is carried westwards. This has branches supplying the south-west angle tower and the south front of the wing, except the clerks' room. From the 4-inch pipe which joins this tank with the principal east and west line, branches are taken off to supply the clerks' and accountants' rooms, and those above and below them.

The water-pipes for the supply of the east end of the Building are similarly arranged to those above described.

In the central portion there is a pipe leading from the main 4-inch line, and is carried down to the rooms on the first floor, and the Post Office and Waiting rooms on the ground floor: this is continued to the messengers' room in the basement; from thence it is carried along under the floor of the main vestibule, and supplies the Post Office and Waiting Rooms on the Senate side, likewise the Railway Committee room on the first floor.

On the Senate side there is a pipe carried down from the 4-inch pipe in the attic to the messengers' room, on the ground floor.

The waste-pipes from the wash-basins are generally brought down alongside those for the supply, and are joined into tile pipes (under the basement floor) leading to the drains.

From the continuous line of 4-inch pipe between the north-west and north-east tanks, there is a branch (4-inch) continued down to the first floor; then runs along the south and east galleries to the north end of the chamber, where it is diminished to 3-inch, and descends to the basement, and has a 1½-inch branch to the kitchen, reduced to 1-inch for the closets.

From this 4-inch pipe in the attic, there is a 3-inch branch leading alongside down to the first floor. This passes along the west gallery to a point opposite the closets in the attic lean-to, from which it is continued northwards (2 inches diameter), for the supply of the rooms in the Speaker's tower, and Telegraph Office. The 3-inch pipe enters the closets, and is there branched off for the supply of the Member's closets on the ground floor, and the closets and saloon in the basement. On the Senate side the arrangement of the above pipes is somewhat similar, with the exception that the Governor General's and Chaplain's rooms are supplied from the 3-inch branch leading to the kitchen.

In addition to the various leading pipes and branches above enumerated, there are numerous smaller ones leading to the wash-basins in the different rooms, closets, urinals, &c., throughout the Building.

In the attic there are five hydrants which can be used in case of fire. One of these is under the main receiving tank, one in each tower adjoining both Members' entrances on this front, and one in the north-east tower; all these four have direct connections with the tanks. The fifth is opposite the main tower, and leads from the principal 4-inch pipe.

On the first floor there are two hydrants, one alongside the west gallery of the House of Commons, and the other alongside the east gallery of the Senate Chamber.

On the ground floor there are four, one on the south end of each wardrobe, and one in the corridor at the entrance to each of the smoking rooms.

In the basement there are four also, situated under those on the ground floor. Thus there are in all fifteen hydrants connected with the pipes for water supply.

A 1½-inch pipe leads down from the principal 4-inch pipe in the attic, through a flue, and passing under the vestibule stairs, enters the boiler-house through an arched opening in the south wall. It then is arranged so as either to discharge into one of the tanks, or into the boilers as may be required.

The 3-inch pipe from the steam-pump passes through the south wall of the boiler-house, and ascends in a flue to the attic, where it is divided into two 3-inch branches, leading to the ceilings of the respective chambers. There are two hydrant cocks on each branch, one inside and the other outside of the cut-off wall at the south end of the Chambers.

DEPARTMENTAL BUILDINGS.

Eastern Block.—The 4-inch main from the east end of the Parliament Building, passes along the rear of this Block, and enters through the north wall of the boiler-house. It is then carried along the east wall, and curves through an arched opening on the south side into an adjoining room, whence it is continued along the basement floor, and to the north wall of the main tower. It rises vertically from this point to the attic, passing through the wall by an arched opening, and empties into the tank placed in this tower, immediately over the main vestibule.

This tank is 18 feet diameter, 10 feet deep, and is supported on two built girders, resting on two brick arches, springing from the angles of the main tower.

There is also a tank in the north-west tower, over the Executive Council entrance, this is 12 feet diameter at bottom, and 12 feet 6 inches at top, and 7 feet deep; and is also supported on brick arches. That in the east tower, Agricultural wing, is oval, 113 square feet horizontal area, 10 feet 8 inches deep, and supported in a similar manner. The tops of these three tanks are on the same level, and 23 feet lower than those of the Paliament Buildings. Their aggregate capacity is 27,500 gallons. They are all joined by 2-inch independent pipes, for equalizing the levels of the water in them, and are also connected by 4-inch pipes, from which the water is distributed to the various wash-basins, closets, &c., throughout the building.

In the receiving tank there is a 4-inch stand or overflow pipe, and a regulating slide valve, moved by a float, which cuts off the supply when the cistern is full. There is also a 2-inch stand pipe in each of the other tanks, which, when removed, admit of their being emptied.

A 4-inch waste leads from the main tank, and is joined in the attic by a 2-inch branch from each of the others. This is carried down alongside of the supply pipe—leads over the top of the reserve tank—and descends along the east wall of the boiler-house to the main drain.

The wastes from the various wash-basins connect with a 4-inch pipe running along the basement ceiling. This dips towards four points, where it is tapped by pipes of similar diameter, connecting with the outside drains.

There are eleven hydrants in this Block, situated as follows:—

Attic.—One at east entrance to model room; one under tank in main tower; one at head of stairs from Governor General's entrance; one under tank in north-west tower.

First Floor.—One in small room adjoining model room, Agricultural wing; one in Attorney General's messengers' room; one over Executive Council entrance.

Ground Floor.—One in Receiver General's messengers' room; one in Minister of Finance messengers' room; one in Provincial Registrar's messengers' room.

Basement.—One in room leading to boiler-house.

Western Block.—The main 4-inch pipe from the west end of the Parliament Building passes into the north side of the boiler-house for this Block, whence it is curved into the tank room alongside. It passes over the top of the tank, and is continued to the north side of the corridor, near the south-east angle tower, where it ascends vertically to the ceiling of the attic. It is conducted from thence to the receiving tank in this tower, which is 12 feet diameter at bottom, 12 feet 6 inches at top, and 7 feet deep, with a regulating valve and float, similar to that described for the Eastern Block.

There is a tank of similar dimensions in the south-west angle tower. Both of these are 8 feet lower than those in the Parliament Building, and are furnished with stand-pipes which either serve as overflow, or, when removed, admit of the cisterns being drained.

The tanks are connected by an independent 2-inch pipe, and also by a 4-inch pipe for distribution: the latter is continued northward to the end of the quadrangle front. From these the wash-basins, closets, &c., on both fronts, are supplied.

The main tank has a 4-inch waste, which is joined by a 2-inch pipe from the other in the attic. This descends alongside the supply pipe to a point in rear of the ventilating shaft: it then turns off and enters the boiler-house, and is continued to the drain on the north side of the building.

The waste-pipes from the wash-basins empty into a 4-inch pipe carried all round near the basement ceiling. This also dips at four places, where it discharges into vertical pipes leading to the tile drains.

There are eleven hydrants in this Block, situated as follows:—

Attic.—One under the tank in south-west tower; one over south entrance; one under the tank in south-east tower; one over entrance on east front.

First Floor.—One north end of corridor (Public Works Department); one over south entrance, in corridor; one in room over south entrance, east front.

Ground Floor.—One north end of corridor (Militia Department); one in room off vestibule, south entrance; one in room at east front entrance.

Basement.—One in room leading to boiler-house.

It will thus be seen that there is a total storage capacity in the tanks in the towers of all the Buildings equal to 112,500 gallons; and there is likewise provided, as a reserve for the use of the boilers, 23,400 gallons: in all, 135,900 gallons.

The length of the different kinds of pipe used for the water and gas services alone is about 49,000 lineal feet, or fully 9¼ miles.

In the foregoing description of the Buildings, and the principal works connected with them, an attempt has been made to be as concise as possible without omitting any important particular; but the structures are of such magnitude, and the details connected with with them so numerous, that it was found impossible to give even a brief sketch of them in less space than has been occupied; whilst if every matter had been referred to, this report would have been unavoidably extended to a much greater length. It is, however, believed that the information now supplied will enable a tolerably clear idea to be formed of their exterior appearance, extent, and interior arrangements.

STATEMENT shewing the amounts expended annually on, and connected with the construction of the Public Buildings at Ottawa, from their commencement in 1859 to the 30th June, 1867:—

Expended from	1st May, 1859, to 31st December, 1859....	$ 10,052.97
Do	1st Jan., 1860, to 31st December, 1860......	423,141.88
Do	1st Jan., 1861, to 31st December, 1861......	655,149.45
Do	1st Jan., 1862, to 31st December, 1862......	17,739.33
Do	1st Jan., 1863, to 31st December, 1863......	248,347.68
Do	1st Jan., 1864, to 30th June, 1864......	158,980.95
Do	1st July, 1864, to 30th June, 1865......	557,682.91
Do	1st July, 1865, to 30th June, 1866....	307,051.43
Do	1st July, 1866, to 30th June, 1867....	345,834.98
	Total	$2,723,981 58

On reference to the first part of this report, it will be seen that the appropriation in 1857 for the construction of the Buildings was $900,000, and that at various times since that period the Legislature has voted further sums towards their completion, amounting to $1,988,344.30, thus making the total amount granted $2,888,344.30; of this there was expended up to the 1st July, 1867, the sum of $2,723,981.28, leaving a balance of $164,363.02 on hand, at that date.

It may, however, be stated that under the head of expenditure are included the sums of $132,221.47, paid for furniture and carpets for the several Buildings, and $19,566.87 for fuel, making the sum of $151,788.34, which cannot be considered chargeable to construction.

The management of, and outlay on, the Buildings, having been frequently enquired into, under the authority of the Government, the Department is already in possession of various explanatory reports and other documents, all but exhaustive of these subjects. It is therefore only deemed proper at present to advert to the principal causes which led to the expenditure being so much in excess of the sum first contemplated.

1st. The designs for the structures seem to have been recommended chiefly on the grounds of their architectural merit, and adopted without the Government being put in possession of anything like a reliable estimate of the cost of carrying them into execution.

2nd. The plans were drawn to an imaginary horizontal foundation line, and with comparatively little provision for heating and ventilation. Upon these incomplete plans tenders were received, and the works awarded at a bulk sum.

3rd. The site selected being of a very irregular surface, and each building covering a large area, it was found at the outset, that in order to obtain a proper foundation a much larger quantity of work was necessary than that shown by the contract plans.

4th. After the building contracts were made, the system of heating and ventilation now carried out was adopted. This involved numerous changes in the contract works of the interior of the structures.

5th. This mode of heating and ventilation entailed many large works, wholly irrespective of the contracts, and for which no estimate of their probable cost was submitted.

These consisted principally of the construction of large boiler houses, sunk 10 feet in the rock below the basement floors; the lowering of the main drains to a corresponding depth—the formation of numerous lines of air ducts, which for the most part were carried out beyond the Buildings to the edge of the hill; the construction of ranges of warm air vaults—the erection of high smoke shafts; together with many matters of detail, which, although in themselves comparatively small, collectively formed a very large item in addition to those above enumerated.

6th. The basements were all excavated, and the greater part of them fitted up for rooms, whereas the original design contemplated, that only a portion of the basements should be used. This change in the Departmental Buildings required area walls, in order to protect the windows for the admission of light.

7th. It was decided to substitute Nepean sandstone for the limestone of the vicinity, for the outer facework of all the Buildings, several months after the works were commenced.

8th. The attic floors were made fire-proof, by means of iron joists and concrete, not embraced in the first contract.

9th. The position of the Eastern Block was altered, and its area enlarged, by forming the present Agricultural wing.

The main tower of the Parliament Building was extended further out; the thickness of the walls and buttresses of the Library increased, &c., &c.

From the above it will be evident, that a very important class of information was wanting at the time when the plans were first approved, and that numerous changes were made, and large additional works carried on, without a knowledge of what they would cost, or the effect they would have on the then existing contracts; whilst subsequent events clearly established the fact that the accepted tenders did not represent anything like the fair value of the works contemplated in the original plans.

This led to difficulties at the beginning, which increased as progress was made, and resulted in complications, that rendered it extremely difficult to effect an equitable settlement with the contractors.

These would have been unlikely to occur, had full information been supplied at first, as proper arrangements could then have been made; and besides the Government would have been placed in a position to determine, in advance, whether works of this style and magnitude should be undertaken, or a class of buildings constructed, the cost of which would, at least, approximate to the sum originally contemplated.

It is doubtless true that in the construction of large buildings there generally arises unforeseen causes of expenditure which swell the ultimate cost beyond the sum anticipated; but it is, nevertheless, to be regretted that the nature of the site chosen for these structures was not fully ascertained at the outset. It would have also been well that a system of heating and ventilation evidently entailing so large an outlay should have been closely investigated and, if fully approved, after its probable cost had been submitted, it should have been made to form part of the plans before tenders were invited, as a great number of air-flues, and recesses for steam-coils, &c., had subsequently to be formed in the walls, and arrangements made for cold air ducts and warm air vaults. Thus the contract works of the interior had to be so much changed that it was alleged by the contractors to be all but impossible to separate "contract" from "additional work." Besides, a large portion of the works connected with heating and ventilation were in such positions that they had to be executed before the contract works could be commenced, so that when the appropriation of 1857 was exhausted and operations suspended, in 1861, it was found that a sum fully equal to that paid on the contract had been expended on additional works.

At this time the outside walls of the Departmental Blocks were generally carried up to the level of the main cornice, and the principal part of the Buildings roofed in, but not slated. The towers were of a similar height to the main walls.

The south front and wings of the Parliament Building were also built up to the line of the main cornice, and the interior walls considerably advanced; but no part of the permanent roof was on. The foundation walls of the Library were carried up to the plinth course, and the exterior works partly executed.

The contractors having prepared and delivered a large quantity of material when the works were stopped, and having the requisite plant provided, the Government, therefore, deemed it advisable to first offer them the completion of the Buildings as recommended by the Commission of Inquiry, and this having been accepted, operations were resumed in May, 1863, upon a basis by which many of the difficulties hitherto experienced were obviated, inasmuch as the different classes of work done were measured and paid for at a fixed schedule of rates, and proportionate prices for items to which the schedule annexed to the contract did not directly apply.

The Departmental Buildings were accordingly completed in 1866, and a final settlement made for the work done under the second contract was satisfactorily and promptly effected.

The contract for the Parliament Building, however, still remains in force, as the upper part of the main tower of that structure is yet unfinished, and the Library, as before stated, is only carried up a few feet higher than the roof of the lean-to by which the central part is surrounded. With these exceptions, the whole of this Building has been completed.

Taking into consideration the many difficulties which have attended the construction of the Buildings, arising chiefly from the causes above referred to, it is, nevertheless, satisfactory to be able to state, that the work generally has been performed in a substantial manner, and at rates which, under the circumstances, cannot be deemed excessive.

The interior arrangements appear to be well adapted to the requirements of the service; the various apartments are suitably fitted up, and some of the best modern improvements have been introduced. The House of Commons has been adapted for the increased number of Members; additional means have been provided for ventilation, and an attempt has also been made to improve its acoustic properties. The original arrangement of the seats in the Senate Chamber has not been altered, but some additional ones have been provided.

The exterior effect of this group of Buildings is greatly enhanced by the natural beauty and prominence of the site, which renders them conspicuous from every part of the surrounding country, so that, in approaching the city in any direction, their irregular mass and numerous towers present a constantly changing and picturesque appearance. Upon closer inspection, their vast extent, ornate character and architectural merits, become apparent; and, in brief, they may be fairly classed amongst the best specimens of the pointed Gothic style on this continent.

WORKS TO COMPLETE.

The original design for the Library of Parliament contemplated the construction of a groined roof, the ribs being of stone, and the spaces between them filled in with hollow brick; the ribs to be supported by marble columns, resting on corbels of the same material; The groin to be 42 feet in height, and the springing line 40 feet over the floor. In the centre of the vaulted space is an opening of fully 30 feet in diameter, the main ribs being so arranged as to touch its circumference and continue in a vertical plane between the springers. Over this opening is a groined lantern, 42 feet high, the top of which is 124 feet over the level of the floor.

The Library is to be circular inside, and 90 feet diameter. The main wall is about 4 feet thick, and its exterior face forms a polygon of 16 sides, at each angle of which is a flying buttress, spanning the roof of the lean-to and joining the main wall at a height calculated to resist the thrust of the vaulted roof. This thrust is thrown in the direction of the greatest resistance, and every precaution apparently adopted to render the vaulting secure. The design, as a whole, is bold, and, if carried out in its entirety, would, doubtless, be very effective.

It is, hewever, to be feared from the large span and the great weight of material in the vault, together with that in the high lantern over it (the central portion being open), that any imperfection in the works might lead to serious consequences. But, without expressing a decided opinion as to the advisability of adopting the present design or otherwise, it might be well to consider whether the same object could not be effected with a greater degree ef certainty by the construction of an iron roof, especially as stone of the required dimensions for a vaulted roof of this span could only be obtained (if at all) at great labor and expense. Indeed, a dome-shaped ceiling and lantern of wood might possibly be built, which would answer the purpose, as its great height over the floor would place it out of the reach of fire from the interior, whilst the outside roof (required in any case) being covered with slate and galvanized iron, or lead, would afford protection to the exterior of the building.

The roof of the main tower has not yet been commenced; it is proposed to be of wood, covered with tin or galvanized iron, octagonal in plan, and tapering to the deck on top, which is 52 feet 6 inches above the pinnacles at the angles, and about 208 feet above the level of the terrace. Upon this a wrought-iron terminal is to be placed, the dimensions of which have not been determined.

The cost of these works is approximately estimated at $185,000.00.

Nothing has as yet been done towards the permanent fencing, or the ornamentation of the grounds; nor have the roads been extended as far as necessary.

The outlay for this will, of course, depend upon the character of the works undertaken; but, it is presumed, that a proper fence will be made alongside of Wellington street, a distance of 1,750 feet. This might be formed of a wall about 3 feet 6 inches over the level of the street, of a good class of masonry, coped with cut stone, and having an ornamental iron railing on top, with gates at the several entrances. The higher portions of the grounds along this street ought to be dressed to a slope, terminating at the rear of the wall, where a proper drain should be constructed. A similar fence and drain might be continued along the east side of Bank street, to the brow of the hill. It would also be desirable that a fence should be carried around the edge of the cliff, so as to complete the enclosure of the grounds.

The square only has been graded, the other portions are as yet untouched, whilst the surface being in many places irregular, it is important that steps should be taken at least to reduce it to some degree of uniformity. For this purpose it would be well that a general plan were agreed upon before the works are *commenced*.

The question of establishing an efficient system of general management for all the Buildings under one competent head, has frequently been brought under the notice of the Department. This has been urged for the reason, that buildings of this extent and character, will require a considerable annual outlay for maintenance, which could be more judiciously applied by a person whose sole business it would be to keep the Building and works connected with them in a thorough state of repair, and the grounds (when finished) in proper order, than if this service were intrusted to various parties who have other duties to perform.

It will always be found difficult to keep the numerous decks, valleys, &c., of the roofs staunch, as the metal covering of these portions expands and contracts considerably during the extremes of heat and cold. This will require the attention of a mechanic under the superintendence of a practical person.

If ice or snow is allowed to collect in the valleys, when a sudden thaw occurs, the water is backed up under the slates, and enters the building; and where a low roof is constructed, immediately adjoining a higher one, ice, if permitted to form, becomes detached during thaws, and when it falls damages the roof below.

The snow must therefore be removed from many parts of the roofs during winter, and the performance of this service should only be intrusted to careful men, as damage has already been done, both to the slate and metal coverings, by careless or unskilful persons.

The roof projections are so small, and there being no eavestroughs, the water falls directly on the basement walls, and the alternate action of wet and frost upon them, takes out the pointing, which must be renewed from time to time.

The proper working of the drains, and numerous other matters outside, will have to be looked after, besides the important duties of attending to the extensive apparatus of heating and ventilation, the works connected with water supply and destribution, gas service, electric bells, &c., all of which would fully occupy the attention of an energetic and competent person, through whom all the expenditure for these purposes could be made.

It is believed that the information called for, on matters relating to the Public Buildings, has now been supplied in such an extended form, as to enable all the important subjects connected with them, to be readily understood.

If, however, further details are required, it is presumed that they can be obtained from the numerous special reports and letters in the possession of the Department.

I have the honor to be, Sir,
Your obedient servant,

JOHN PAGE,
Chief Engineer, Public Works.

APPENDIX No. 22.

(No. 1280.)

REPORT OF F. P. RUBIDGE, ARCHITECT AND ASST. ENGINEER.

DESCRIPTION OF OLD AND NEW WORKS AT RIDEAU HALL, RESIDENCE OF THE GOVERNOR GENERAL.

F. Braun, Esquire,
Secretary of Public Works.

Ottawa, October 17, 1867.

Sir,—Referring to my previous report, printed as Appendix No. 14, attached to the Departmental Report of a former Commissioner, laid before the Legislature for the year 1865, for a description of the property known as "Rideau Hall," in the Township of Gloucester, and about two miles distant from the Parliament Buildings, in which report extensive additions and improvements were contemplated as about to be undertaken, to render Rideau Hall a suitable and becoming residence for the Governor General of Canada, I have now the honor to submit a succinct statement of the buildings since added to the original dwelling, with the out-offices, stables, and other edifices newly erected, together with a brief allusion to the general improvement of the grounds and premises attached, all of which have been so far completed, furnished, fitted up and prepared, as at the present date to be in the occupation of His Excellency and family, his suite and domestic establishment.

The old, unpretending stone house, the former abode of the late Honorable Thomas Mackay, having a superficial area of about 3,700 feet, afforded merely eleven rooms, most of which were of very limited dimensions. To this edifice, a new main building and domestic wing of picked and dressed limestone, covering 10,200 superficial feet, or nearly three times larger than the old dwelling, have added some forty-nine more rooms to the mansion, most of them of large area. The full complement of apartments, therefore, in Rideau Hall will now number sixty, not including attics. There are also three baths, eight water closets, a large tank in the roof for hard and soft water, holding about 2,500 gallons collectively, a supply of which is daily pumped up from the basement. Hot and cold water are also laid on for the use of the chamber-story, and to the several pantries and culinary apartments on the ground floor.

To the south of the mansion, and communicating from the veranda in front by an enclosed porch, is attached a conservatory, 56 feet long by 26 feet wide. A short distance therefrom, a new vinery has been erected, 100 feet in length, and which has been stocked with a choice variety of grape vines; both the conservatory and vinery are heated by steam piping. Convenient thereto are erected two small brick buildings, adapted as the gardener's potting and boiler houses.

The public enter the residence from an outside porte-cochère into a spacious hall, 42 feet 6 inches by 18 feet 6 inches, formed in the old building, out of the north wing, the private or family residence being in the new portion of the house, fronting the lawn towards the west.

Rideau Hall has recently, over every apartment and corridor, been carpeted throughout, as well as fitted up in a handsome modern style, with highly finished furniture, made of the various Canadian and other woods, from the well known manufactories of Jacques & Hay, of Toronto, James Thompson, of Montreal, and William Drum, of Quebec.

The halls, rooms, passages and stairways are covered with neat wall-papering, finished with gilt mouldings in the superior chambers. These latter range in area from 40 feet by 25 feet to lesser dimensions, and although a ball-room proper was not embraced in my instructions, the extent of state-rooms, opening in suite, and the ample width of corridors would afford accommodation to a large public assembly.

In preparing Rideau Hall as a residence, the intentions of the Department were restricted to ample space, commodiousness, abundant light in every part, free ventilation, and a simple mode of heating, combined with the utmost economy in the outlay, and I have pleasure in stating that these objects have been successfully attained, and approval expressed thereon, very recently, in the highest quarters.

The stabling and coach-house are spacious wooden structures, sufficient for a stud of fourteen horses, provided with four loose boxes, harness rooms, granaries, coachman's and groom's living apartments, and large hay-lofts.

There is also an ice-house, a winter carriage-house, and byre for several head of dairy cattle, forming the north range of out-buildings—as well as a detached stone building, newly put in order and fitted up as a laundry.

To the east of the stables is a large driving-shed, carpenters' shop, and store-room for winter sashes and summer blinds, stoves, &c. A new guard-house has been erected for soldiers on duty, near the rear entrance gate at Rideau Hall; and, lastly, a convenient cottage residence, 55 feet by 45 feet, containing fourteen rooms, and constructed of red brick, having a veranda on three sides, and standing at the distance of 240 yards south of the main building, has been put up for the abode of the Governor General's private secretary, Denis Godley, Esq., the interior being papered, painted, and neatly finished.

Very considerable outlay became necessary in excavating the rock for a supply of pure spring water for drinking purposes attached to the kitchen, and drainage has been most thoroughly effected of the moist bog lands in the vicinity of the house and stables, and the plantations where wet spots occur. The entire property has been surrounded by high park railing, and a fresh entrance gate gives access to the new avenue of approach to the Hall.

The improvements which have taken place in the grounds of the property have also been very extensive,—consisting of forming and fencing in a new kitchen-garden; levelling and sodding over a plot of land for a cricket-ground; planting a belt of forest trees and evergreens on the boundaries of the estate, which planting has yet to be continued this present autumn; inclosing off with cedar picket fencing the grazing lands, fields and roadways; constructing a new avenue and carriage drive; macadamizing and metalling this and other existing roads; making new roads to stables and the secretary's cottage—in all, about a mile in length of new road; and further, cutting, clearing and levelling fully two miles of foot-path through the bush lands and around the property, and spreading gravel over the same, thus forming circuitous retired walks, the which ameliorations have been judiciously and tastefully effected under the charge of Mr. Alpine Grant, landscape gardener, residing on the premises.

The prospective works at Rideau Hall, likely ere long to be called for, consequent in part on the recent leasing of several acres of the river frontage, extending from the new extrance gate and avenue to the waters of a bay on the Ottawa River, will be a new entrance lodge, stone piers and iron gates; fencing in the acquired property to a greater or less extent; also, the continuation of the veranda around the circular front of the old house; erecting a wood-shed, out-offices, and fencing in rear of Mr. Godley's cottage; forming a root-house under the present driving shed, frost-proof, with additional cedar picket fences where required, &c.

So large an establishment must necessarily occasion, for some time to come, a demand for mechanical supervision and labor to supply incomplete or unfinished wants and alterations continually arising, as well as to keep the entire premises in thorough repair. There will also be needed a daily service of laborers in carting water from the river to fill exhausted tanks of it supplied from the roofs, and in pumping for cisterns to meet the great consumption of the residence, the stables, and the laundry, the well in the kitchen affording *hard water* in sufficient abundance as a beverage, &c. Labor will also be required in keeping the roofs and decks, and around the buildings and doorways, free from snow, shifting articles of furniture, &c.

For some time to come there will be a constant demand for a carpenter's services in putting up and taking down winter sashes and outside blinds, easing doors and windows and jobs of mending and alterations when suddenly called for, such as are ever recurring in a newly erected edifice as extensive as Rideau Hall with its numerous out-buildings.

I have therefore to suggest, in execution of the new works alluded to as likely to be required shortly, and for the repairs and maintenance of Rideau Hall in good condition that one or two carpenters and laborers, under the direction of the present Clerk of Works, be retained for a limited period, or so long as may be found requisite to continue their services, and as has been found necessary at Spencer Wood, near Quebec.

The expenditure called for from time to time in altering, adding to, furnishing and fitting up Rideau Hall, its accessories and out-buildings, with draining, fencing, heating, watching, supervision and insuring the premises, as also the improvement of grounds, gardens, roads, and walks, will be found set forth in the financial statement furnished by the Accountant of the Department, appended to the Report of the Honorable the Minister of Public Works.

I have the honor to be, Sir,
Your obedient servant,

F. P. RUBIDGE,
Assistant Engineer, Public Works.

APPENDIX No. 23.

(No. 911.)

REPORT BY G. F. BAILLAIRGÉ.

DESCRIPTION AND COST OF THE PUBLIC BUILDINGS CONSTRUCTED OR IMPROVED BY THE DEPARTMENT OF PUBLIC WORKS.

Department of Public Works,
Ottawa, 25th September, 1867.

F. Braun, Esquire,
Secretary of Public Works.

Sir,—The following report respecting the Public Buildings constructed or improved under the Department of Public Works, has been prepared at the request of the Deputy Commissioner.

Before describing any of the edifices, I shall explain the principal circumstances which led to the construction of the Parliament and Government Houses, at different periods, in several parts of the Province.

Quebec, which was founded in 1608, by Samuel de Champlain, was the Seat of Government for Canada, under the French.

The Castle of St. Louis, which stood on the site now occupied by Durham Terrace, was the residence of the French Governors-in-Chief, from the time of its construction, about 1624, until the capture of Quebec by the British in 1629, and from the time this city was restored to France in 1632, until it capitulated to the British on the 18th September, 1759.

After Canada became an English colony, Quebec remained the capital of the whole Province, then called the Province of Quebec, until 1791.

In 1791, the Province of Quebec was divided by an Act of the Imperial Parliament into two Provinces, under the names of Upper Canada, with a population estimated at 20,000, and Lower Canada with a population of about 130,000.

The Seat of Government was then established in the Town of Newark, now Niagara, for the Upper Province, and in Quebec for the Lower Province.

As Newark was within range of an American fort on the opposite side of the Niagara River, the Town of York, now Toronto, founded about 1794, was selected as the Capital of Upper Canada; suitable Parliament Buildings were constructed, and the Legislature was assembled at York, for the first time, on the 6th of June, 1797.

In Quebec, the Bishop's Palace, erected towards 1688, on the site of the present Parliament House, was leased for the sittings of the Legislative Council and Assembly, who held their first Session for Lower Canada on the 17th of December, 1792. Parliament continued to assemble here until 1838, when Montreal was selected as the Seat of Government until 1841.

On the 10th February, 1841, the Provinces were reunited, and Parliament was summoned to meet at Kingston on the 13th of June, of the same year.

The City of Montreal was afterwards selected as the Permanent Seat of the General Government, and the sessions of the Legislature were held in this city from the summer of 1844 to the summer of 1849.

The Buildings in which the Parliament was held, in Montreal, having been destroyed by fire on the 25th April, 1849, it was decided that the Legislature should meet for two years in Toronto, and afterwards for four years alternately in Quebec and Toronto.

The Seat of Government was removed to Toronto in the fall of 1849, and remained there till the autumn of 1851, after which it was transferred to Quebec, where it remained until the fall of 1855.

It then returned to Toronto, and four years afterwards to Quebec, where it remained from the summer of 1859 to the fall of 1865.

The system of alternate Parliaments having been abolished by a vote of the Provincial Legislature, on the 24th of March, 1857, Ottawa was selected as the Capital of Canada by Her Majesty, who had been requested to select a permanent Seat of Government for the United Provinces; Her decision was communicated to the Canadian Parliament on the 16th March, 1858, in a despatch from the Colonial Secretary, dated the 31st December, 1857, and the construction of the Parliament and Departmental Buildings, in this city, was commenced in 1860.

These edifices having been pronounced sufficiently complete for the accommodation of the Legislature and Government offices, in the fall of 1865, the Seat of Government was then removed to Ottawa, where Parliament assembled, for the first time, on the 8th of June, 1866.

On the 1st of July, 1867, Ottawa became the Capital of the Dominion of Canada, which comprises the Province of Upper Canada, now styled the Province of Ontario; of Lower Canada, now the Province of Quebec, and of New Brunswick and Nova Scotia.

The dimensions ot the various Buildings described in this report, have been taken chiefly from the plans and reports furnished at various times to the Department by its Architect, Mr. F. P. Rubidge, and by Mr. P. Gauvreau, who has charge of most of the public buildings in Lower Canada.

HOUSES OF PARLIAMENT.

THE QUEBEC PARLIAMENT HOUSE,

In its present condition, presents a front of 276 feet, and is situated at the south-eastern extremity of the Grand Battery, near Prescott Gate, where it stands at an elevation of about 150 feet above the St. Lawrence.

It consists, principally, of a central portion, measuring 60 feet in front by 135 feet in depth, and three stories in height, and of two wings, of a length of 108 feet each by 43 feet in depth, and two stories in height.

The building is of English fire-brick, with a roof covered with gravel and Warren's cement. It was constructed in 1859 and 1860, at a cost of $61,514.77, according to a design furnished by F. P. Rubidge, Architect of the Department.

The site, upon which this structure stands, contains 76,993 superficial French feet; it was acquired on the 1st of August, 1831, by the Government, from the Roman Catholic Bishop of Quebec, for a yearly perpetual and unredeemable ground rent of £1,000 sterling ($4,866.67).

The Bishop's Palace, which was erected on this site, towards 1688, by Monseigneur de St. Valier, was afterwards extended and improved by his successors; in 1743, it was occupied by the French Intendant, after his Palace was destroyed by fire; it was afterwards leased by the Imperial Government, for the use of the Lower Canadian Legislature, prior to the first session of 17th December, 1792.

It then consisted of a chapel at the centre, and a left wing with an extension at right angles to the south-westward, near Prescott Gate; the entire block was faced with cut-stone, and was two stories high; its principal facade was towards the St. Lawrence. The chapel, measuring 65 feet in length, and 36 feet in breadth, was fitted up as a Chamber for the Provincial Assembly.

After the property came into the possession of the Government, the construction of a new Parliament House, upon the site of the Bishop's Palace, was decided on; the north-west wing of the new edifice was constructed from 1830 to 1834, upon the site chosen for the north-west wing of the Bishop's Palace; the chapel was demolished, and upon its site the central portion of the new building was constructed, between the years 1833 and 1835; the main entrance to the centre of the building was under a portico, formed by four cut-stone columns of the modern Ionic order; these columns rested on a rusticated base, and carried a pediment of cut-stone; the central portion of the edifice was crowned by a dome. The outlay incurred on the Parliament House, from 1830 to 1836, amounted to $67,370.76; the finished portion of the new building, including what remained of the old one, covered three sides of a parallelogram, and thus presented the figure intended at the original foundation of the Bishop's Palace. The design of the new Parliament House was furnished by Messrs. Thomas Baillairgé and F. X. Berlinguet, architects, of Quebec, and the edifice was constructed by Mr. Fortier, Master Mason, of the same city.

In 1844, the property was assumed by the Corporation of Quebec, who paid the assessments and insurance, and kept the building in repair until required for the Government service.

In 1851 and 1852, the south-eastern wing of the old edifice was demolished, and rebuilt at a cost of $54,385.43; the remainder of the building was improved by an expenditure of $7,758.32, and furniture to the amount of $18,928.13, was provided for the whole of it.

The New Parliament House, thus completed, presented a façade and two wings three stories high, with outer walls of cut-stone throughout.

This structure was completely destroyed by fire in 1854; its ruins were sold to the Corporation of the City of Quebec, in 1858, and used by them to construct the Champlain Market Hall.

The Grey Nunnery, which was fitted up for the use of the Legislature, after the fire of 1854, was also destroyed by fire, and had to be rebuilt at the expense of the Province.

MONTREAL PARLIAMENT HOUSE.

The St. Ann's Market Hall on McGill street, and opposite the Grey Nunnery, was leased on the 1st of May, 1844, for the use of the Legislature, on its removal from Kingston.

The lease was for a term of eight years, at the rate of $1,036 for the first three years, and $6,000 for the remainder of the term.

The cost of converting the Market Hall into a Parliament House amounted to $17,282.81, which sum was paid by the Government.

This building was destroyed by fire on the 26th April, 1849, after which the Seat of Government was transferred to Toronto, where it remained until 1851.

The Montreal Parliament House was a cut-stone edifice, two stories high, 342 feet long, 50 feet wide at each end, and 58 feet wide at the centre, for a length of 46 feet. It was designed by Messrs. Thompson & Wells, architects, and constructed by a company, at a cost of about $60,000. After its destruction by fire, it was replaced by the present new Market Hall, which is a brick structure.

THE OTTAWA PARLIAMENT AND DEPARTMENTAL BUILDINGS,

Consist of three detached structures, situated on the south side of the Ottawa River, immediately above the ravine at the entrance to the Rideau Canal.

The site forms part of the Ordnance property ceded to the Provincial by the Imperial Government, and formerly known as "Barrack Hill." It rises about 159 feet above the summer level of the river, and commands a view of the entire city and surrounding country.

The Buildings are located on the northern, eastern, and western sides of the hill, leaving a rectangular plot in the centre, measuring 600 feet from north to south and 700 feet from east to west, on Wellington street.

The exterior walls are rock-faced, and consist of random-coursed sand-stone masonry, relieved by Ohio cut-stone dressings and quoins. They are covered by truncated roofs, with slate on the slopes and galvanized sheet-iron on the decks, which are surrounded with gilded crestings of wrought-iron.

The Parliament House, a Gothic edifice, chiefly in the early English style, stands on the north side of the quadrangle, upon which it presents a front of 472 feet in length, and two stories in height above the basement, its breadth being 370 feet at the centre and 181 feet across the main eastern and western extensions; it was designed by Messrs. Fuller and Jones, architects, of Toronto.

This structure is not yet completed. The masonry of the central tower, over the main entrance, has been carried up to a height of 156 feet, and is completed with the exception of the pointed roof. The library, connected with the main building, some distance in rear of the central tower, also remains in an unfinished state.

The Departmental Buildings, designed by Messrs. Stent and Laver, architects, of Ottawa, are also in the Gothic style: they are erected respectively on the east and west sides of the square. Each Building averages a breadth of 60 feet, with a corridor in the centre, and is two stories in height above the basement. Both are covered by truncated roofs, with slating on the slopes and galvanized sheet-iron on the decks, which are crowned by gilded iron crestings, the same as on the Parliament House.

The Eastern Block has two principal façades, at right angles to each other: one, 319 feet in length, upon the square; and the other, 245 feet, upon Wellington street.

The Western Block is somewhat similar in shape to the Eastern, having a frontage of 220 feet on the square, and another of 277 feet upon Wellington street.

The grounds have been only partly laid out, with carriage ways and sidewalks along the front of the edifices and the north side of Wellington street, upon which they terminate.

Messrs. Fuller and Jones were appointed Architects of the Parliament House on the 29th of November, 1859, and on the same day Messrs. Stent and Laver were appointed Architects of the Departmental Buildings. They acted in this capacity until the spring of 1863, when Messrs. Fuller and Chas. Baillairgé were appointed joint Architects of all the Buildings, viz: on the 11th of April, 1863.

Mr. Thomas McGreevy constructed the Parliament House, the contract for which was signed on the 7th of December, 1859, for a sum of $348,500. Messrs. Jones, Haycock and Clarke constructed the Departmental Buildings, for which they signed a contract on the same day, for a sum of $278,810.

The contract for the works connected with the heating and ventilation of all the Buildings, was awarded to Mr. Charles Garth, of Montreal, on the 28th January, 1860, for a sum of $61,285.

Building operations having been suspended for a period of about eighteen months, new contracts were entered into with the same parties for their completion.

On the 20th of December, 1859, the excavation of the foundations, and the preparation of building materials was commenced. On the 26th of April, 1860, the masonry of the Parliament House was commenced, and the corner stone of the north-east angle of the Legislative Council Chamber was laid by the Prince of Wales on the 1st of September, 1860. The Eastern Block of the Departmental Buildings was commenced on the 2nd of April, 1860, and the Western Block shortly afterwards. The works were suspended on the 1st of October, 1861, covered in for the following year in a temporary manner, and resumed in the spring of 1863, and completed with the exceptions already stated.

On the 1st of July, 1867, the cost of the edifices was as follows, viz.:—

For construction including awards to contractors, works connected with heating, ventilation, supply of water and gas, grading of grounds, alterations for House of Commons, &c..........	$2,363,531.67
To carpets, furniture, and fitting up....................................	132,221.57
For electric bells and batteries..	5,288.31
For superintendence, awards to architects, and special arbitrations	222,940.13
Total outlay up to 1st July, 1867............................	$2,723,981.68

A full description of these Buildings will be found in a special report thereon (No. 808, 29th of August, 1867,) by the Chief Engineer. (*See page* 201 *of Appendix.*)

THE KINGSTON PARLIAMENT HOUSE,

Which was constructed in 1835 as an hospital, is situated between Stewart street towards the north, O'Kill street towards the east, and King street, along Lake Ontario, towards the south. Its front entrance is upon Stewart street.

It is of coursed-stone masonry, with quoins and dressings of cut-stone; it is three stories in height above the basement, and is covered with a shingled roof.

When Kingston was selected as the Capital of the united Provinces of Upper and Lower Canada, in 1841, this hospital was converted into a House of Parliament, according to a design furnished by George Browne, architect, of Montreal, and at a cost of about $4, 74.

Instead of rental, a sum of $2,000 had to be paid yearly, by the Government, during their occupation of the premises in 1841–42–43, for the support of the indigent sick of the City of Kingston.

The first Session of the United Parliament commenced at Kingston on the 13th of June, 1841.

TORONTO PARLIAMENT HOUSE.

The site upon which it is erected is situated in the western portion of the city, on a lot bounded by Front, John, Wellington and Simcoe streets, and containing 9.44 acres.

The building is two stories high, with exterior walls of red brick, and a truncated roof, covered with shingles and an outside coating of felt and gravel, for which slate is now being substituted.

It faces Front street, southward, where it commands a view of Lake Ontario, and measures 394 feet in length; the façade is 130¼ feet long, and 89¼ feet wide; the east wing, towards Simcoe street, has a length of 132 1/12 feet, and a breadth of 55½ feet; the west wing, opposite John street, is 131⅔ feet in length, and 55½ feet in breadth.

At the rear of the central corps, there is an open court, flanked on the east and west sides by two wings of wooden frame-work, each of which is 44½ by 24½ feet; and on the north side, fronting Wellington street, there is a wooden structure, built for the library, resting on pillars, with an open space beneath.

The earlier history of the Parliament Buildings of this city is given, as follows, by the *Hand Book of Toronto*, published in 1858:—

"The first Parliament Houses were erected in the year 1796, on a site near the present jail, at the east end of the city. They were of brick, two in number, 40 by 25 feet, and standing 100 feet apart,—a space which was afterwards filled up by additional buildings. They had some pretensions to elegance of design and construction, but were destroyed by the Americans, on the taking of the town, in 1813. They were replaced in 1820, the Government business having been, meanwhile, transacted in the building on Wellington street, lately occupied by Chief Justice Draper, but which has now disappeared (1858).

"On the night of the 30th December, 1824, they were destroyed by fire, caused by some defect in the flues—a fruitful cause of accidents to Parliament Houses in Canada: loss estimated at £2,000 ($8,000). Several journals, and other papers belonging to the House, were destroyed.

"Parliament met in the brick hospital, on King street, until the erection of the present Houses, which were commenced soon after the fire, but not completed till 1830, four years before the Town of York was incorporated under the title of Toronto.

"The designs were prepared by J. G. Chewett; the west wing was built by Messrs. Ewart and Parkes; the centre was commenced by Mr. Priestman, and finished by Mr. Joseph Turton."

After the union of the Provinces, 10th February, 1841, the Seat of Government for Upper Canada was removed from Toronto to Kingston, the Capital of the United Provinces, until the selection of Montreal as the Capital, in 1844.

The Toronto Parliament House was afterwards enlarged and improved, according to the plans of William Hay, architect, for the accommodation of the Legislature, when the seat of Government was transferred from Montreal to Toronto, in consequence of the destruction of the Parliament Building of the former city by fire, in April, 1849.

After the removal of the Seat of Government from Toronto to Quebec, in 1851, and on its transfer from Quebec to Toronto, in 1855, further improvements were made to the building.

The Legislature having been removed a second time to Quebec, in 1859, occupation of the Toronto Parliament House was granted to the military authorities for officers' quarters and barracks, on the 11th July, 1861. Seven days afterwards a fire occurred in the east wing, but was subdued before much damage was done. A more serious fire occurred in the west wing, on the 24th of July, 1862, destroying the entire roof, and doing much injury to the interior of the building. The roof was rebuilt, and the wing restored, by the military authorities, who remained in possession of the premises, free of rent, until they were required for the use of the Local Government of the Province of Ontario, established on the 1st of July, 1867.

The principal expenditure incurred since the Union, upon the Toronto Parliament House, and the Government House, which is described under a separate heading, was from 1849 to 1852, when it amounted to $66,252.40; and from 1853 to 1858, when a further outlay was made of $178,063.15.

GOVERNMENT HOUSES.

SPENCER WOOD, QUEBEC,

Is situated 2 miles beyond Lewis Gate, on the road leading to Cap Rouge, upon the north bank of the St. Lawrence.

This property, embracing 60 acres of land, and the buildings thereon, were leased in 1850, for a term of four years, at the rate of $1,800 yearly, from H. Atkinson, Esq., for the residence of the Governor General.

The Government reserved to itself the right of purchasing, in the course of one year from the 1st of January, 1851, for the sum of $32,000.

It was purchased shortly after it was leased, together with 10 more acres of land, for which an additional sum of $8,000 had to be paid, thus making the total cost of the property purchased amount to $40,000.

A new wing, outbuildings, and a wall of stone and brick, enclosing a portion of the grounds, were afterwards constructed.

These improvements were commenced in 1851, and completed towards 1856, at a total cost of $142,657.70.

The Albion Hotel was leased, with its furniture, for a sum of $2,000, for a period of six months, from the 14th October, 1851, as a residence for the Governor General, until sufficient accommodation was provided for his abode at Spencer Wood.

On the evening of the 28th of February, 1860, the whole of the state portion of the building at Spencer Wood was destroyed by fire. It was reconstructed in 1862 and 1863, at a cost of $28,015.71.

The buildings, in their present state, may be described as follows, viz. :—

The residence of His Excellency the Governor General, a two-story brick building, of 185 × 50 feet, with a wing 56 × 33 feet, and a shingled roof.

A stone building of 30 × 15 feet, one story in height, for the use of the domestics.

A summer-house, built of brick, measuring 14 × 15 feet, and covered by a tinned roof.

The remainder of the buildings are of wooden frame-work. They consist of an ice house, 54 × 20 feet; a vinery, 85 × 18 feet; barracks, 70 × 20 feet; and stabling, 135 × 30 feet, and 90 × 18 feet.

In 1809, Spencer Wood (then Powell Place) was the summer residence of Sir James Craig, Governor General of Canada, whose love of display and generous hospitality secured for him the name of the "Little King."

CATARAQUI, QUEBEC,

Consisting of a brick dwelling-house, and other buildings, together with 17½ arpents of land attached to it, is on the St. Louis road, about three miles beyond the City of Quebec.

It was leased in 1860, from Henry Burstall, Esq., at an annual rental of $1,600, in order to provide a temporary residence for His Excellency, after the destruction of his dwelling at Spencer Wood, by fire, on the 28th of February, 1860.

Shortly afterwards, a guard house and kitchen were erected, the stabling was enlarged, and the hot-air furnaces were re-constructed, at a cost of $8,781.67.

According to an agreement with the owner, the Cataraqui property had to be sold at public action, when no longer required; if the price obtained at the sale was less than $20,000, the Government was to pay the balance to Mr. Burstall. The sale was effected accordingly, on the 2nd of Feburary, 1863, for a sum of $12,100, leaving a balance of $7,900, which was paid by the Government.

THE OLD CHATEAU ST. LOUIS, QUEBEC,

Is now occupied by the Laval Normal and Model Schools for the Roman Catholic population of Three Rivers, the eastern portion of the district of Three Rivers, and of the districts of Quebec, Kamouraska and Gaspé.

It is situated between Durham Terrace and the Place d'Armes, and is 102 feet in length, 41 feet in breadth, and two stories in height, with one wing 31 by 22 feet, also two stories in height, and another wing 62 by 23 feet, three stories in height.

The outside walls of this edifice are of rubble masonry, excepting those of one of the wings, in which they are of coursed masonry.

The site occupied by the old Château and Durham Terrace, covers an extent of about 70,000 square feet, and was formerly enclosed, within the ramparts of the second fort, which was constructed by Samuel de Champlain, in 1623, after the first fort opposite *Sault au Matelot*, at the north-west end of the present Grand Battery, had been abandoned.

Durham Terrace rests chiefly upon the foundation of the old French Castle, which was the original Château St. Louis, formerly the residence of the French Governors, until the time of the surrender of Quebec, on the 18th September, 1759.

The foundation of this old castle was laid out by Champlain, on the 1st May, 1624, and the masonry was commenced five days afterwards, to replace an old building which had been erected on the same site for the use of the soldiers and other persons.

The building erected by Champlain was of stone, and only one story in height; in which state it appears to have remained for more than 67 years.

Baron de la Hontan, who was in Quebec, in 1690, describes the old French Castle as being one story in height at that time.

The author of the "Voyage de l'Amérique," "La Potherie," who visited Canada, in 1698, states that the edifice was then two stories in height, with a lofty attic; that it stood near the edge of a precipice, rising to a height of 180 feet, and measured 120 feet in length; he states also that one of the wings, 33 feet in length, had not been constructed up to that time.

Charlevoix, who arrived in Quebec in October, 1720, represents the castle, which was generally styled the "Fort," as a stately edifice, with two pavilions, built on the summit, and near the brink of a rocky precipice, which was concealed from above by an overhanging gallery, with a balcony extending along the entire length of the building.

After the conquest it became the official residence of the English Governors, for a period of about 50 years.

It was raised by the addition of a third story, and was thoroughly repaired and improved, at a cost of $40,000, in 1809.

The improved building, which was then named the "New Château," was covered with a tinned roof, and measured more than 200 feet in length, and 40 feet in breadth, inclusive of the wings at each end; the first story was provided with a gallery, projecting above the precipice, and commanding a magnificent view of the St. Lawrence and the Laurentides for more than 30 miles towards the north-east.

This interesting relic of the past was destroyed by fire on Thursday, the 23rd day of February, 1834, at the time it was inhabited by Lord Aylmer, then Governor of Lower Canada.

After the arrrival of Lord Durham, in 1838, the ruins were removed down to the top of the foundations, which were levelled off and covered over with a wooden platform, guarded on the outside by an iron railing.

The site of the burnt castle thus became a place of public promenade, to which the name of Durham Terrace has been given. This terrace and the adjoining grounds were improved in 1854 and 1855, at a cost of $12,444.

The "Old Château," which stands opposite the west side of Durham Terrace, was constructed between the years 1800 and 1809; it was occupied as a residence by the Governor during the restoration of the ancient castle, after which it was used for levées on state occasions, and for other public entertainments, until the time of the reunion of the Provinces in 1841.

Occupation of the building was then granted to the Corporation of Quebec, until it was required for Government purposes, from 1851 to 1856; it was afterwards fitted up for the Quebec Normal and Model Schools, and was so occupied, from the time of their inauguration, on the 12th of May, 1857, till the summer of 1859, when it was re-occupied by the Government for various offices of the public service. On the removal of the Seat of Government from Quebec to Ottawa, in the fall of 1865, the Château was again vacated by the Public Departments, and has since been in the occupation of the Laval Normal and Model Schools.

THE OLD GOVERNMENT HOUSE, MONTREAL,

Is now occupied by the office of the Superintendent of Education for Lower Canada, and the Jacques Cartier Normal and Model Schools for the Roman Catholic population of the Districts of Ottawa, Montreal, St. Francis, the western portion of the District of Three Rivers, and the City of Three Rivers.

This edifice is situated a short distance to the eastward of Jacques Cartier Square, and upon the south side of Notre Dame street.

In front it is 100 feet in length, 51 feet in breadth, two stories in height, and is built of stone; in the rear it has a wing 136 feet long, 30 feet wide, four stories high, built of brick; towards its western end there is a detached stone building 83 by 25 feet, two stories in height, with a roof covered with sheet iron.

The stone structures, which are of the same style of construction, were erected at a remote period; the brick wing was constructed in 1847 and 1848.

The lot upon which these buildings stand contains an area of 55,823 square feet.

The following information, concerning the early history of the old Government House, is condensed from an article written by the Rev. Mr. Hospice Verreau, Principal of the Jacques Cartier Normal School, and published in the [*"Journal de l'Instruction Publique,"*] vol. 1, pp. 149 to 151, March, 1857:—

The principal building, fronting Notre Dame street, and formerly known as " Le Vieux Château," was constructed by Claude de Ramezay, Esq., Seignior of la Gesse, Boisfleurent and Monnoir, Knight of the Military Order of St. Louis, formerly Governor of Three Rivers, afterwards Governor of Montreal, father of J. Bte. Nicolas Roch de Ramezay, who signed the capitulation of Quebec.

Towards 1704, Mr. De Ramezay, who had been appointed Governor of Montreal the previous year, purchased the site upon which he probably commenced the construction of his mansion, shortly afterwards.

In 1721, it appears to have been visited by Charlevoix, and, in 1723, its situation was indicated on a plan now in the possession of the Sulpicians, of Montreal.

After the death of Mr. De Ramezay, in 1724, the Château remained in the possession of his heirs until 1745, when it was sold by them to the " Compagnie des Indes," who converted it into their principal entrepôt of fur traffic with the Indian tribes of the country.

Although this company had ceased to exist, towards 1750, the building bore their name until the time of the capitulation of Montreal, 8th September, 1760, after which it was purchased by Mr. Grant, and, at a later period, by the Government prior to 27th April, 1762.

After the conquest, it was chosen as the official residence of the Governors, and was thus restored to its original destination.

During the American invasion, in 1775, it was occupied by the American Brigadier-General Wooster; and in 1776 by his successor, Benedict Arnold, who held a council there with the illustrious Franklin, the two Carrolls, and Mr. Chase.

About the year 1784, it was repaired and improved by the Baron St. Léger, who made it his residence for some time, after which it was occasionally occupied by the Governors when they visited Montreal.

When the Special Council was established in Montreal, from 1837 to 1841, and after this city became the permanent Seat of Government, from 1843 to the fall of 1849, the old Government House and adjoining buildings were used for the offices of the Executive Government; from the fall of 1849 till the winter of 1856, they were used as a court house and county registrar's office, during the construction of the new court-house.

Since the end of December, 1856, the *"vieux château,"* or front portion of the main building, has been occupied as the head-quarters of the Superintendent of Education for Lower Canada, and the wing in rear by the Jacques Cartier Normal and Model Schools for the Roman Catholic population of the districts before enumerated. The stone building westward of the Government House is occupied by the porter of the Jacques Cartier Normal and Model Schools and by Col. Ermantinger, Chief of the Montreal Police Force.

The inauguration of the Jacques Cartier Normal School took place in the old Government House, on the 3rd day of March, 1857.

The amount expended on the brick wing, up to the time of its completion, in 1848, was $14,395.40. In 1856 and 1857, the cost of fitting up the buildings for the present Educational Department amounted to $5,416.80.

THE FOLLOWING TABLE, taken from a Report of J. G. Sippell, C.E. (No. 84,125), shows the dimensions of the Government property, in connection with the Old Government House, the buildings adjoining it, at the corner of Notre Dame street and Jacques Cartier square, and the Government Garden, on the north side of Notre Dame street, in front of these properties:

DESCRIPTION.	DIMENSIONS IN ENGLISH FEET.		
	Breadth.	Depth.	Area.
Government House and appendages	162	228	36,936
Deduct—Encroachments by No. 78	2	31½	63
			36,873
Property, late F. W. & H. Desrivières, at corner of Notre Dame street and Jacques Cartier square purchased on 12th July, 1849	100	97½	9,750
Property on Jacques Cartier square purchased 13th Oct., 1858, from the "Royal Institution for the advancement of learning,"	60½	100	6,050
Parcel of land purchased from Mr. Rodier, at the rear of the Government House property, and at the entrance of the lane leading to St. Paul street	105	30	3,150
Total on south side Notre Dame street			55,823
Government Garden—Front on North side of Notre Dame street,	223½	S.W. side 171	33,587
Do Rear, opposite Champ de Mars	246	N.E. side 118	
Total			89,410

The Government Garden was sold in June, 1867, to the Corporation of the City of Montreal, on condition of their building a city hall thereon.

MONKLANDS,

The former residence of the Governor General, Montreal,

Is situated near the north-west side of the Mountain of Montreal.

It was leased in 1844, as a residence for the Governor General, for a term of five years, at the rate of $700 per year.

The first lease having been afterwards altered, another lease was made for $1,800, payable annually until its expiration, on the 1st of May, 1854.

When the Seat of Government was removed to Toronto, in the fall of 1849, the unexpired term of the lease was disposed of, by public auction, for a sum of $500 a year, leaving a balance of $1,300 to be paid yearly by the Government.

Shortly after this property was leased by the Government, the dwelling-house thereon was enlarged by the construction of a new wing; barracks, a barn, an ice-house, and other buildings were constructed; the total expenditure thus incurred amounted to $41,643.28, on the 31st of December, 1849, after which there was no further outlay.

RIDEAU HALL, OTTAWA.

RESIDENCE OF THE GOVERNOR GENERAL.

This property, containing about 74 acres of land, with dwelling-house and other buildings, is situated near the confluence of the Rivers Ottawa and Rideau, in the Township of Gloucester, and County of Russell, at about 2 miles from the Parliament House, of the City of Ottawa.

It was leased, on 2nd August, 1865, by the Government, for a term of 12 years, from the heirs of the late Hon. Thomas McKay, at a yearly rental of $4,000, with the right of purchasing the property during the first three years for the sum of $70,000, and afterwards for such a sum as might be determined by arbitration.

In 1865 a contract was entered into with Messrs. Ward, of Montreal, and O'Leary, of Quebec, builders, for the construction of additional buildings, and the alteration and enlargement of those which had been constructed by the previous owners—the whole according to designs furnished by Mr. F. P. Rubidge, Architect of the Department.

The original dwelling, built of limestone, some 25 years ago, measures 73 feet in length and 47 feet in breadth, and stands near the centre of the property.

This dwelling has been enlarged by the addition of a stone building, 137 feet in length and 56 feet in breadth, with a wing in the rear, measuring 72½ × 74 feet.

In its present state it presents a front of 210 feet, with a veranda 137 feet in length, and it rises two stories above the basement. The flat portion of the roof is covered with galvanized iron, and the slopes with shingles laid in mortar.

Southward of the main building, at a distance of about 700 feet, a brick cottage measuring 55 × 45 feet, has been erected for the residence of His Excellency's Private Secretary.

A conservatory, vinery, laundry, guard-house, winter carriage-house, coach-house, an ice-house, stables, &c., have also been provided. The grounds have been fenced in, and roads and paths have been repaired and gravelled.

The total outlay for improvements on this property amounted, on the 1st of July, 1867, to the sum of $80,819.66.

GOVERNMENT HOUSE AND PUBLIC OFFICES, KINGSTON.

GOVERNMENT HOUSE.

This was the residence of the late Baron Grant, who leased it for a Government House from 1840 to 1844. It is situated on the lake shore, near the Penitentiary, at about 1 mile to the west of the city.

At the time it was leased, it consisted of a main building, two stories in height, and two wings, one story in height, the whole of stone.

It was enlarged by the construction of a wing of wooden frame-work, and was otherwise improved, at a cost of $17,600, in the spring of 1841, according to designs furnished by George Browne, architect, of Montreal.

The new wing measured 135 feet in length by 26 feet in breadth, and was two stories in height, above the basement. It was demolished by the proprietor, after it was vacated by the Government, in 1844.

PUBLIC OFFICES.

The buildings occupied for the use of the various departments of the Government, from May, 1841, to June, 1844, were rented from the late Henry Gildersleeve.

They are situated on Ontario street, and consist of a row of cut-stone buildings, two stories in height.

These buildings were fitted up as required, and outbuildings were constructed, at a total cost of about $14,374.

They were vacated on the transfer of the Seat of Government to Montreal, in the summer of 1844.

GOVERNMENT HOUSE, TORONTO.

This is a wooden, rough-cast building, two stories in height, resting on a stone foundation, situated between Wellington, John, King, and Simcoe streets.

It measures 104 by 76 feet, on the portion fronting on Wellington street; 80 by 52 feet on the adjoining portion, opposite King street, and is covered with a shingled roof.

The main block was constructed about the year 1828; the rear wings, connecting it with the east and west wings, were built in 1849 and 1850.

The grounds upon which the main building and its dependencies have been erected contain an area of 6.11 acres.

The Provincial Normal and Model Schools for Upper Canada, when first established, in 1847, were allowed to occupy the Government House until it was required for the public service in 1849.

In 1850 and 1851, after the Seat of Government had been removed from Montreal to Toronto, Elmsley Villa was leased, at an annual rental of $1,000, for the temporary residence of His Excellency the Governor General, as the Government House could not be occupied at that time.

Elmsley Villa was abandoned after the transfer of the Seat of Government to Quebec, in the fall of 1851. The Government House was fitted up prior to the return of the Seat of Government to Toronto, and it became the residence of the Governor General in 1855–6–7 and 8, when the property was still further improved.

Quebec having again become the Capital, in the summer of 1859, occupation of the Toronto Government House and grounds was afterwards granted to the military authorities, during pleasure of the Government, and on condition that the property should be returned in the same order as received. The keys of the premises were handed over to the Barrack-master on the 9th of January, 1862, and on the following day the state portion of the building was destroyed by fire.

When Toronto first became the Seat of Government for Upper Canada, in 1797, the residence of the Lieutenant Governor was in a log-house, named Castle Frank.

This building, which was destroyed by fire about the year 1828, stood on the high ground northward of the old Don and Danforth road, near the eastern limits of the city.

PROVINCIAL OBSERVATORIES.

QUEBEC OBSERVATORY.

This is a substantial cut-stone structure, two stories in height, with a tower attached to it.

It presents a front of 26 feet; the main building is 15 feet in height, 15 feet in breadth, and 24 feet in length; the tower is 44 feet in height to the top of the ball, which crowns its summit, and measures 11 feet by 11 feet at its base.

This Observatory is situated within the Citadel of Cape Diamond, between the Flag Staff and the old French works, towards the south-west of the citadel.

In connection with this establishment there is another building, which is situated a short distance to the eastward of the New Jail, on the north bank of the St. Lawrence, on what is known as the Bonner property; this property, which has been purchased by the Provincial Government, is one mile beyond the city limits, on the road leading from St. Louis Gate to Cap Rouge.

The structure on the Bonner property consists of a small tower, with a detached dwelling-house of wood, one story high, and measuring about 60 feet in length, by 30 feet in breadth.

The Observatory in the Citadel was constructed in 1854 and 1855. The total expenditure incurred for this establishment, during these two years, amounted to the sum of $12,132.45.

The following account of the Quebec Observatory, was furnished by E. D. Ashe, Commander, Royal Navy, on the 22nd of last August, (No. 668) :—

"In 1847, the Harbor Master, Captain Boxer, the Council of the Board of Trade of Quebec, the Commander of the Forces, Sir Richard Jackson, and Professor Airy, the Astronomer Royal, strongly urged the necessity of building an Observatory at Quebec, for the purpose of ascertaining and communicating *Time* accurately to the shipping.

"The estimate for building the Observatory in the Citadel was £525 16s. 6d. sterling ($2,523.88.)

"The instruments were supplied by Greenwich Observatory, consisting of a transit instrument, a 42-inch telescope and a sextant; two good clocks were furnished by the Provincial Government.

"Lieutenant Ashe, Royal Navy, was appointed by the Admirality, and came out in 1850, and took charge.

"All that was necessary for a "Time Obervatory" was complete; and the shipping have had the correct time given to them daily, during the season of navigation, since that time; and the risks and dangers of the sea lessened thereby.

"Out of the appropriation of $2,400 for the establishment, Lieutenant Ashe got permission to reserve any surplus that might remain out of the grant, to form a fund to purchase instruments.

"In 1864, taking advantage of the difference of exchange between Canada and the United States, there was sufficient money saved, to purchase a very fine equatorial, of 8 inches clear aperture, from the celebrated Alvan Clarke, of Boston, valued at $2,500.

"It arrived in this country in May of the same year, and was erected in a tower, beautifully situated, on a property formerly belonging to a Mr. Bonner.

"The site, together with an old farm-house and several acres of land, was given, by the Provincial Government, for the use of the Observatory, and there is now all the instruments of a first-class Observatory, fully worked, and in operation.

TORONTO MAGNETICAL OBSERVATORY.

This Observatory was founded by the Imperial Government, in 1846.

Up to 1856, the observations were taken in a wooden building.

The buildings used for the present Observatory are of stone, and are situated southward from the University, on the Ordnance property, which was ceded by the Imperial to the Provincial Government in 1853.

They were commenced in 1854, and completed in 1856, at an outlay of $13,851.72.

The following description of the present Observatory is taken from the *Hand Book of Toronto*, published in 1858 :—

"The main building is a rectangular structure, about 54 feet from north to south, in the direction of the magnetic meridian, 44 feet from east to west, and 16 feet in height, exclusive of the roof.

"At the north-west corner, and included in the above horizontal dimensions, is a square tower, 16 feet by 16, the top of which is 45 feet above the ground.

"From the southern face of the main building, and at right angles to it, extends a passage, 4½ feet wide, which communicates at its southern extremity with a room 20 feet by 13, appropriated to the observations for determining the horizontal magnetic intensity."

"On the east and west sides of this passage, and communicating with it by a second transverse passage, are two small rooms—the transit room and the absolute declination room.

"The three rooms just mentioned, with their connecting passages, form a cross of 72 feet from north to south, 73 feet from east to west, and 8½ feet in height.

The extreme length of the whole is thus 126 feet, and its greatest width 73 feet.

CUSTOM HOUSES.

THE SEVEN ISLANDS CUSTOM HOUSE

Is situated at the Bay of the Seven Islands, on the north shore of the St. Lawrence, 330 miles below Quebec, by water.

The Collector at this Port occupies a building which has been rented from John Geo. Gregg.

In 1864, a sum of $241.33 was expended for repairing the roof, floors, windows and chimney of this building.

OLD CUSTOM HOUSE QUEBEC, NOW THE IMMIGRATION OFFICE.

This building, which was erected in 1831 and occupied in 1832 (No. 922), stands near the spot where the American General Montgomery and other officers were killed, in their attack upon the Lower Town, on the 30th December, 1775.

It is two stories in height, 85 feet in length, and 52½ feet in breadth, with outside walls of cut-stone, and a tinned roof. Its west front is on Champlain street, opposite the spot where about 40 persons lost their lives, and an entire range of buildings were destroyed by the sliding of the cliff, at 11¼ a.m., on the 17th May, 1841.

In 1863, a shed of wooden frame-work was constructed in the rear of the old Custom House for the use of immigrants. This shed is 100 feet long, 20 feet wide, one story high, and is covered with sheet-iron.

The lot upon which these buildings stand, contains 27,180 superficial feet, and is bounded northward by the Queen's wharf, southward by the river police station, westward by Champlain street, and eastward by the St. Lawrence; here it is protected by a wharf, which is provided with a landing slip enclosed by a hand-railing.

The Custom House was occupied by the Collector from the time of its completion, in May, 1832, until some time after the disaster of the 17th of May, 1841. In 1844, it was placed, together with the Legislative, and other Government buildings at Quebec, not including the Jail and Court House, under the charge of the Corporation of Quebec; they enjoyed the benefit of any revenue arising from the rental or use of the buildings, and paid the annual charges for assessments, insurance and repairs. It was occupied for some time by the sufferers of the fires in St. Roch's and St. John's suburbs of Quebec, in 1845. The water police occupied a portion of the building, from the 1st of May, 1847, to the 31st of March, 1852, when it was resumed by the Government for the use of the Nautical School, which occupied it for about two years.

By an Order in Council of the 30th June, 1854 (No. 1,286), it was transferred, for the sum of £5,500 ($22,000), to the Grand Trunk Railway Company, who used the building as a station-house until the summer of 1861; it was then reassumed by the Government, and occupied as a storehouse for the use of the Legislative Council and Assembly until 1862, when it was fitted up and supplied with water for the use of the Immigration Agent and immigrants.

In 1864–5, it was fitted up for temporary occupation by the Collector of Customs and staff, who occupied it from the 19th September, 1864, to the 23rd April, 1866, during the reconstruction of the new Custom House, which was destroyed by fire, on the 10th September, 1864.

The reconstruction of the new Custom House having been completed in 1866, the old one was reoccupied by the Agent of Immigration, who still occupies it.

THE NEW CUSTOM HOUSE FOR THE PORT OF QUEBEC

Is situated on a lot containing 88,000 square feet, southward of the Harbor Commissioners' wharf, and northward of the East India wharf, at the confluence of the St. Lawrence with the River St. Charles.

This edifice was designed by Mr. Thomas, architect, of Toronto, and was constructed by Mr. Thomas McGreevy, builder, of Quebec, who signed the contract on 15th December, 1856.

It is a cut-stone edifice, two stories in height, with a basement, founded on the bed of the river and protected on all sides by a substantial wharf of crib-work, filled with stone.

It is 159 feet in length, 49 feet in breadth, and comprises a portico of 60×34 feet on its principal facade, opposite the St. Lawrence. This portico, which is of the Doric order, consists of a pediment supported by six cut-stone fluted columns, 4½ feet in diameter at their base, and resting on a cut-stone basement.

The roof is covered with galvanized sheet-iron and is crowned with a dome covered with tin.

A site was purchased for the new Custom House, on 16th June, 1854, from the Hon. William Walker, for £3,000 ($12,000) ; but the site having been considered too small, the present one was purchased on the 24th November, 1855, from John Jones, Esq., for a sum of £5,000 ($20,000) and in exchange for the site first purchased ; the cost of the present site, therefore, amounts to £8,000 (32,000.

The works were commenced in the year 1856, after which, they were suspended on 21st January, 1857, resumed in September, 1858, and completed on the 30th July, 1860, at a cost of $227,227.00.

Occupation of the premises was given to the Collector of Customs, on the 1st of July, 1860.

The interior portion of the building was destroyed by fire, on the 10th September, 1864, and was rebuilt in 1865 and 1866, at a cost of about $27,000 ; this is $3,000 more than the amount received from the Royal and Quebec Insurance Companies, each of which had insured the building for $12,000.

THE MONTREAL CUSTOM HOUSE

Was built from a design by Mr. Ostell, architect, of Montreal.

This is a cut-stone building, two stories in height, of the Tuscan order, measuring 64 feet by 49 feet, and stands in the centre of a square, which forms part of the site of the old market, between St. Paul street and Commissoner street, upon each of which it presents a front surmounted by a triangular pediment.

Its main entrance is provided with a portico, supported by columns of cut-stone, and commands a view of the harbor, from which it is separated by Commissioner street, and the line of cut-stone wharfing, which leads to the wooden docks, situated between its base and the margin of the St. Lawrence.

This edifice was commenced in 1836, and completed in 1838, at a cost of $18,000.

The site it occupies embraces an area of 9,938 feet.

The only expenditure made by the Department upon this Custom House, has been for repairs, the cost of which, from the time of the Union, 10th Feburary, 1841, up to the 1st of July, 1867, amounts to $1,257.63

THE ST. RÉGIS CUSTOM HOUSE

Stands on a lot of land measuring about 80 feet, on the main road, by 152 feet or more, on the rear, and forming part of the Indian Reserve, in the Village of St. Régis, on the south shore of the St. Lawrence, at the head of Lake St. Francis, about 67 miles above Montreal.

By an Order in Council, No. 1,263, of the 7th April, 1854, the Commissoner of Public Works, was authorized to construct a Custom House at the Port of St. Régis, the cost of which was limited to £310 (1,240) ; he was also authorized to secure a site for that purpose, from the Indian agent, on a twenty-one years' lease, at a yearly rent of £3 15s ($15.00), and on payment of a sum of £17 10s. ($70.00), to Joachim Orité, the Indian occupier of the lot so required.

The site was secured accordingly, and a contract for the construction of the building was awarded, in June, 1854, for the sum authorized, to Alexander Belsland, of Cornwall, who completed the building in November of the same year.

The amount expended on this building was $1,357 in 1854, for construction, and $70 in 1855 for the lot—in all, $1,457.

THE DUNDEE CUSTOM HOUSE,

Is a frame building, measuring 42 by 20 feet, with a wing of 40 by 20 feet ; the whole is one story in height, and is covered with a shingled roof.

It is situated upon a lot measuring 11,921 square feet, in the village of Dundee, near the Salmon River, in the County of Huntingdon, in the Seigniory of Beauharnois.

This lot was purchased on the 15th March, 1847, from the Hon. P. McGill, for the sum of $400.

The work was commenced in October, 1846, and completed in May, 1847, by Samuel Coggin, contractor.

The amount granted by Order in Council of 2nd March, 1846, for this Custom House, was $1,200, out of which the cost of the site and building was defrayed. An additional sum of $200 was paid to the contractor by Mr. L. H. Masson, then Collector of Customs at Dundee.

The building has since been improved and repaired.

KINGSTON CUSTOM HOUSE.

A cut-stone edifice, in the Italian style, two stories in height, with a basement and a portico in the Doric style, and a flat-pitched roof covered with tin, designed by Messrs. Lawford, Nelson and Hopkins, architects, of Montreal, and constructed by Thomas C. Pidgeon, contractor.

It is situated at the corner of King and Clarence streets, with its front upon the latter, and it measures 77 feet in length, by 52 feet in breadth. The lot upon which it is built is enclosed by a dwarf cut-stone wall and iron railing.

This Custom House is heated by Chilson's hot-air furnaces.

Ground was broken on the 6th of October, 1856: the masonry was commenced in 1857. The entire work was completed in 1859, at a cost of $41,805.52, up to the 1st of January, 1860.

THE TORONTO CUSTOM HOUSE,

For which an appropriation was made by the Act 8th Victoria, chap. 69, was designed in the Modern Italian style, by Kivas Tully, architect, and constructed by John Snair who signed the contract for its construction on the 13th of August, 1845, and completed it in June, 1846.

This edifice, which measures about 45 by 36 feet, was constructed at an expense of $10,148.21, including the cost of the heating apparatus and the fixed furniture, and has been improved and kept in repair since the time of its completion.

It is situated on Yonge and Front streets, a short distance from the lake shore, and is two stories in height above the basement.

The basement is of coursed stone and the remainder of the building is constructed of white brick, on the north and south fronts; the brickwork of the north front is relieved by quoin stones with rusticated joints: the roof is covered with tin.

The main entrance to the Custom House is through a portico, with four cut-stone fluted columns and antes of the Grecian Doric order. The building is supplied with water and gas, and is now heated by stoves instead of the hot-air apparatus formerly in use. The ground in front of this edifice is enclosed by an iron railing on a cut-stone plinth.

THE HAMILTON CUSTOM HOUSE,

Is situated on Stuart street, near the top of the hill leading from the Grand Trunk Railway station to the city; the lot upon which it stands, was purchased in September, 1855, for a sum of $8,000, from Messrs. E. Moore, J. F. Moore, and H. McKinstry, under the Act 18 Vic., cap. 90.

It is a cut-stone edifice, comprising a basement with two stories, and a flat roof, and measuring 80 feet in length, by 56 feeth in depth, and 40 feet in height; its outer walls are of free-stone and lime-stone; the building is heated by hot-air, and is provided with gas pipes, hydrants, and lightning rods. It was designed by F. P. Rubidge, Architect of this Department, and was constructed by G. Murison, who signed the contract in May, 1858.

The work was commenced the same year, and was completed in 1860, at a cost of $36,259.90, exclusive of the expenditure for the site, &c., in 1855–6 and 7, amounting to the sum of $9,928.55.

Possession of the building was given to the Collector in the summer of 1860.

THE PORT DALHOUSIE CUSTOM HOUSE,

Was established in the village of St. Catharine about the year 1845, in the building formerly occupied as the Welland Canal office.

In 1855, a new building was erected, and has since been occupied partly as a Canal Office, and partly as a Custom House; this structure is of brick, with stone dressings, and a roof covered with slate; it is two stories in height above the basement, and measures 51 feet in front by 46 feet in depth; the Collector of Customs occupies two rooms and a large vault with iron doors, on the ground floor, for which no rent is charged by the Canal establishment. The cost of the new structure amounts to the sum of £2,870 7s. 2d. ($11,481.43), which was paid out of one of the Canal appropriations.

THE RONDEAU CUSTOM HOUSE

Is situated in the Village of Strawsburgh, and consists of a log-house, which is reputed to be in a very dilapidated condition.

The construction of a new building, in the Village of Rondeau which is considered as a more covenient site, has been recommended.

POST OFFICES.

THE OLD POST OFFICE, QUEBEC,

Is a stone building with the gilded image of a dog "Le Chien d'or," cut on a stone placed above its main entrance; it is 85 feet in length, 45 feet in breadth, and two stories in height, with a tinned roof, and is situated in the Upper Town, upon a lot measuring 11,500 square feet, at the east end of Buade street, immediately above the steps leading through Prescott Gate to the Lower Town.

This old structure, in which the Post Office has been held since the spring of 1845, was previously occupied as a Freemasons' Hall; it was purchased in 1853, from the heirs of the late Chief Justice Sewell, for a snm of £4,000 ($16,000.00).

Mr. Hawkins, in his "*Picture of Quebec*," explains the origin of "Le Chien d'or" as follows :—

The building is remarkable in the local history of Quebec, for a representation in stone, over the entrance from Buade street, of a dog gnawing a bone, with an inscription in French. This having been always gilt, has acquired the name of "Le Chien d'or."

Mr. Philibert, who resided in this house, was a merchant of high distinction, during the time Mr. Bégon was Intendant of New France. The latter had formerly been a merchant of Bordeaux, and came to Quebec in 1712.

Differences occurred between Mr. Bégon and Mr. Philibert, who being unable to obtain redress, for injuries real or supposed, expressed his sentiments under the image of the "chien d'or," to which he added the following inscription in old French :

"JE SVIS VN CHIEN QVI RONGE L'OS."
"EN LE RONGEANT JE PREND MON REPOS."
"VN TEMS VIENDRA QVI N'EST PAS VENV"
"QVE JE MORDERAY QVI M'AVRA MORDV."

I am the dog that gnaws the bone.
Whilst gnawing the bone I take my rest.
The day will come, though not yet come,
When I shall bite the one who bit me.

According to Mr. Jacques Viger, Mr. Philibert was afterwards killed in 1748, during a quarrel, by Mr. de Repentigny an officer of the French Garrison; the victim pardoned the murderer, before he died; Mr. de Repentigny having obtained his pardon, returned to Canada from which he had escaped, and commanded a company under the Chevalier de Lévis in the battle of the 28th April, 1760.

Prior to the occupation of the Freemasons' Hall by the Post Office, it was temporarily held in the Old Château, where it had been removed after the burning of the Post Office, which was situated on a portion of the site of the present Archbishop's Palace.

THE MONTREAL POST OFFICE

Is situated on a lot of ground containing 8,136 square feet, and bounded northward by Great St. James street, eastward by St. François Xavier street, and southward by Notre Dame street.

This edifice was designed by Mr. Wells, architect, of Montreal, and built by Messrs. John Orr and Andrews.

It comprises a basement and three stories, with a portico and pediment on Great St. James street; it is of coursed cut-stone masonry, measures 100 feet in length and 56 feet in breadth, is covered by a flat roof, coated with felt, tar and gravel, and is heated by means of stoves.

Its construction was commenced in 1853 and completed in 1855, at a cost of £10,734 10s. 11d.—($42,938.18.)

Some improvements were made to the building in 1858 and 1860, at an expense of $3,037.97, beyond which no further outlay has been incurred by this Department up to the 1st July, 1867.

THE KINGSTON POST OFFICE

Stands on a portion of the site formerly occupied by the old court house and jail, at the corner of Wellington and Clarence streets. This site was obtained from the County Council, in exchange for a part of the property which belonged formerly to the Ordnance, in the south-west part of the city, and is known as the Murray property.

This building has been constructed in the Italian style, from a design by Lawford, Nelson & Hopkins, architects, of Montreal; the heating of it is effected by means of Chilson's hot-air furnaces.

It measures 73 feet in length by 59 feet in breadth, exclusive of a projection on the rear, measuring 36 by 7 feet; and it comprises a basement and two stories, with a flat, pitched roof, covered with tin.

It was constructed by Messrs. Overend & Mathews, contractors, who commenced the work in October, 1856, and completed it in 1859, when it was handed over to the proper authority.

The expenditure incurred on this edifice, up to the 1st of January, 1860, when it was fully completed and fitted up, amounted to the sum of $39,273.95; in addition to which, a sum of $373.17 was expended in 1860–1, thus making a total expenditure of $39,647.12, up to the 1st of July, 1867.

THE TORONTO POST OFFICE

Is an edifice measuring about 44 feet in front by 77 feet in depth; it has a Greek Ionic front of free-stone, with four fluted columns and antes at the angles, supporting a plain, horizontal stone cornice, with the royal arms carved above it, at the centre, on a low plinth. The flanks and rear are built of white brick, with stone heads, pilasters, capitals, and sills; the front portion is two stories, the rear one story in height, and the roof is covered with slate. It was designed by Messrs. Cumberland & Storm, architects, of Toronto, under whose superintendence it was constructed; it is provided with gas-pipes, hydrants, and one of Chilson's hot-air furnaces.

The lot on which it stands is situated between Adelaide, Toronto, Yonge and King streets; it was purchased on the 2nd August, 1851, from E. F. Whittemore, for a sum of £1,137 10s.—($4,550); on the 27th March, 1866, additional ground was acquired for the use of the Post Office, from Mr. Johnston, for a sum of £25—($100.)

The contracts for the construction of this building were awarded to Messrs. James Medcalfe, D. Forbes, A. Wilson, and others, in 1851 and 1852.

The work was commenced in 1851 and completed in 1854, at an expense of $25,399.22, up to the 1st of January, 1855; a further sum of $2,666.85 was expended in 1856–'57, and '60, for drainage, improvements and repairs.

On the 1st of July, 1867, the total expenditure upon this Post Office amounted to the sum of $28,066.07.

THE HAMILTON POST OFFICE,

On the east side of James street, was designed by Messrs. Cumberland and Storm, architects, of Toronto, and was constructed by Messrs. G. Sharp and William Huston, contractors, who signed the contract for its construction on the 28th June, 1854.

It comprises three stories, with a truncated roof covered with slate, and is built of dressed free-stone and lime-stone, which is rusticated and vermiculated on the front of the first story. It measures 61 feet in length, 55 feet in depth, and 45 feet in height, from the surface of the ground to the top of the eaves cornice. On the front there is a projection, measuring 41½ feet in length by 10½ feet in breadth. The building is supplied with water and gas, and is heated by hot-air.

The site of this Post Office comprises two parcels of land,—one on James street, purchased from Edmund Ritchie, on the 12th August, 1853, for £2,000 ($8,000); the other on Rebecca street, purchased in 1854, from the Hon. Isaac Buchanan, for £475 ($1,900).

The building was commenced in 1854, and was available for the transaction of business in 1856. It was completed and fitted up at a cost of $51,654.62, including purchase of site, up to the 1st of January, 1858, after which a sum of $974.80 was expended during the following year for improvements to the drainage, ventilation and heating.

LONDON POST OFFICE.

The site for this Post Office was purchased by the Postmaster General, from Messrs. W. and J. Carling, in 1856, for a sum of $8,640.

The building was constructed by Mr. Elliot, from a design of W. B. Leather, architect. It is three stories in height, with outside walls of cut-stone masonry, and is covered with a truncated roof: on the front there are eight Corinthian cut-stone pilasters between the first story and the eaves cornice.

It measures 48 feet on the front, 59 feet on the rear, and 66 feet in depth.

The work was commenced in the fall of 1858, and completed in 1860, at a cost of $30,482.76, exclusive of the purchase of the site, but inclusive of the outlay for fitting up, &c.

The total outlay on this building, for site, construction, improvements and repairs, up to the 1st July, 1867, amounts to the sum of $40,526.06.

HOSPITALS AND ASYLUMS.

GROSSE-ILE QUARANTINE STATION.

When the Asiatic Cholera made its appearance in the north of England, in December, 1831, it was deemed advisable to establish a Quarantine Station on some isolated spot on the St. Lawrence, below Quebec.

Grosse-Ile, an Island situated 33 miles below that city, and nearly midway between the shores of the St. Lawrence, was selected as the most suitable place for such a station, in the spring of 1832, at which time the requisite buildings were commenced, shortly before the Cholera broke out in Quebec, on the 8th of June, 1832.

All ships are required by law to come to anchor opposite this Island; and passengers, under certain circumstances, are required to land.

The following is a list of the buildings and other works constructed up to the date of Mr. Gauvreau's Report, No. 84,099, of the 15th of January, 1867, viz.:—

1	Landing wharf, in the sick ward, 345 feet in length by 48 feet in breadth, at the outer end, near south-western extremity of Island, built in 1847 and 1848.		
1	Landing wharf, in the healthy ward, 120 feet by 28 feet, built in 1866, at lower end of Island.		
1	Catholic chapel	18×30	feet.
1	Protestant do.	37×25	"
1	Catholic parsonage	38×24	"
1	Protestant do.	23×39	"
1	Guard-house	37×20	"
1	Store-house	30×18	"
1	do.	30×44	"
4	Hospital Sheds	120×24	"
4	do.	100×24	"
1	do.	144×24	"
1	do.	150×24	"
1	do.	204×20	"
8	do.	204×24	"
1	Farmer's house	30×30	"
4	Houses for police force	24×24	"
1	Dwelling-house for the assistant of the Medical department	65×20	"
1	New Hospital shed, on stone pillars	204×24	"
7	Houses	45×17	"
2	do.	54×25	"
1	do.	72×17	"
1	Dwelling-house for Dr. Von Ifland, Medical Superintendent	36½×28	"
1	House	39×12	"
3	do.	24×18	"

The dwelling-houses of the Doctors and the Parsonages are built of wooden framework, and are in tolerably good order; all the other houses and sheds, except the new sheds built in the summer of 1866, are of open frame-work, clapboarded on the outside; they were constructed as temporary hospitals, and several of them are now in a dilapidated condition; these hospitals are capable of accommodating about 600 patients.

All the buildings are covered with shingled roofs; the two landing piers are built of square timber crib-work, bolted together with iron bolts, and ballasted with stone.

The land occupied by the Government at this station covers an extent of about 650 superficial arpents. It is divided into districts, for the purpose of preserving the healthy and convalescent patients from contact with the diseased.

The expenditure at Grosse-Ile, so far as can be ascertained from the accounts published in the Reports of this Department, was as follows, viz.:—

From 10th February, 1841 (or the time of the union), to 1847,—none shewn.

In 1847, the year of the ship fever, and 1848.... £10,629 5s. 3d.—($42,517.05.)

In 1847–8, for the construction of the landing pier at upper end of Island, now used by sick ward.................... £3,445 1s. 5d.—($13,780.28.)

Total, from 1st January, 1849, to 1st July, 1867, for repairs, improvements and new works....... £18,271 3s. 0d.—($73,084.16.)

In addition to the above outlay, a further sum of $32,902.85 has been expended on account of the Emigration and Quarantine service, from 1st January, 1851, to 1st July, 1867.

IMMIGRANT SHED, QUEBEC.

This building stands on the wharf in rear of the old custom house, on the east side of Champlain street, in the Lower Town of Quebec.

It is of wooden frame-work, and measures 100 feet in length, 20 feet in breadth, and one story in height; it is covered with sheet-iron, and provided with chimneys of brick masonry; the contract price for its construction was $900.

This shed was built in 1863, for the shelter of Immigrants, after the sheds formerly used for their accommodation, on the Indian wharf, had been occupied for another purpose.

For further details—see " Old Custom House, Quebec," page 259 of Appendix.

MARINE HOSPITAL, QUEBEC.

This edifice was designed by H. M. Blaiklock, architect, of Quebec, and was partly constructed under the management of Messrs Clouet, Cannon and Dr. Morrin, Commissioners appointed by Government. It presents a front of 270 feet, and is situated at a distance of 1,575 feet to the north-eastward of the General Hospital, on the neck of a peninsula, formed by the River St. Charles, and called " La Pointe aux Lièvres," near which Jacques Cartier spent his first winter in Canada, in 1535. The remains of *La Petite Hermine*, of about 60 tons, one of the vessels in which this celebrated navigator crossed the Atlantic, were found bedded beneath the soil, near the River St. Charles, in 1844, by the late Joseph Hamel, Esq., opposite the upper end of " La Pointe aux Lièvres," at 3,037 feet to the south-westward of the Marine Hospital. The whole of the peninsula, which is about 2,700 feet in length, 375 feet in breadth at its narrowest part, and 1,000 feet in breadth at its widest part, belonged formerly to the Government, who afterwards disposed of a portion of it in lots for ship building purposes.

The outside walls of this building are of cut-stone, and its roof is covered with tin.

It consists principally of a central corps, four stories high, 70 feet long, and 58 feet wide, and a wing at either end 100 feet in length, 48 feet in breadth, and three stories in height. The main entrance to the central corps is through a portico, which is 35 feet in length, and 8½ feet in breadth, and is formed by four cut-stone columns 2½ feet in diameter at the base, of the ancient Ionic order, resting on a cut-stone base, and supporting an entablature of cut-stone. In this building there is accommodation for 275 patients.

Near the main building stands the Cholera Hospital, known formerly as the fever hospital, a wooden structure, 202 feet long by 24 feet wide, two stories high, covered with a shingle roof, and capable of accommodating 100 cholera or fever patients.

The first stone of the principal building, which was then estimated to cost $92,000, was laid on the 28th of May, 1832, the anniversary of the birthday of William IV.

The central portion and west wing were completed at a cost of $60,000, in July, 1834, when the building was opened for the reception of sick mariners and immigrants.

The drainage and sewerage were improved, and an enclosed wall and railing were built, in 1853 and 1854.

The east wing was constructed in 1854-5 and 6, at an expense of about $50,647.

In 1856–7 and 8, the old portion of the building was repaired, painted and improved; the wharves for the protection of the property against the action of the tides were reconstructed; a floating platform for the easy landing of the sick and maimed was built; the old fever shed was removed, and a new one commenced for a cholera hospital. The corpses of the old burial ground were exhumed, and the grounds enclosed by a fence, the whole at a cost of $37,077; the cholera hospital, which was commenced in 1858, was only completed in 1866, at a cost of about $8,000.

The grounds belonging to this establishment cover an area of about 120,000 feet.

The total sum expended under the Department upon the Marine Hospital and premises, for construction and repairs, from the time of the union, 1841, to 1st of July, 1867, amounts to $109,911.50.

IMMIGRANT SHEDS IN MONTREAL.

Most of these buildings were erected in 1847, at Point St. Charles, in the western portion of the City of Montreal, near the north-western terminus of the Victoria Railway Bridge, across the St. Lawrence; they comprise :—

1 Flag-staff station.
1 Surgery.
1 Straw-house.
1 Bathing-house.
2 Cook-houses.
21 Hospitals, of total length of 2,364 feet, and a breadth of 30½ feet.
1 Wash-house.
4 Wood-houses.
1 Grave-digger's and coffin-house.
1 Coach-house.
1 Stable.
6 Privies.
1 Gate-house.

The remainder, called the old immigrant sheds, were built partly in 1847, and partly at an earlier period, on the south side of Basin No. 2, of the Lachine Canal, between the Wellington street bridge and Point St. Charles, viz :—

1 Cook-house.
1 Straw-house.
1 Surgery.
1 Coffin-house.
6 Hospitals, of a total length of 1,015 feet, and a breadth of from 20 to 20½ feet.
7 Out-buildings for various purposes.

Nearly all these buildings were constructed in a temporary manner, and were designed specially for the use of immigrants, during the time of the ship fever in the summer of 1847. They consisted of wooden frame-work, boarded on the outside, and covered by shingled roofs.

In June, July and October of 1847, 13 arpents, 27 perches, 143 feet superficial of land, were leased from the Grey Nuns of Montreal, for the use of the immigrants at Point St. Charles, for a term of about one year, at a rental of £163 ($652); this land, and an additional quantity of 21 superficial arpents, or 34 superficial arpents in all, together with a stone-house and other buildings erected thereon, were purchased by the Government from the Grey Nunnery of Montreal, on the 23rd August, 1853, for a sum of £13,600 ($54,400); the land and buildings were afterwards transferred to the Grand Trunk Railway Company. On the 12th of February, 1862, they were sold by James Hodges, Esq., to Messrs. Peto, Brassey & Betts.

The land occupied by the Government on the south side of Basin No. 2, or between Wellington street bridge and Point St. Charles, comprises two parcels, viz. :—

One containing 20 arpents 51 perches, superficial, and which was purchased by the Government on the 23rd of August, 1853, for a sum of £10,255 ($41,020) from the Seminary of St. Sulpice.

Another, containing 35 arpents, superficial, and which was sold by the Hôtel Dieu Nunnery to the Government, on the 23rd August, 1853, for a sum of £14,000 ($56,000).

The Government expenditure on the above buildings was chiefly confined to the years 1847–8, and amounted to £16,599 1s. 3d. ($66,396.25).

THE CRIMINAL LUNATIC ASYLUM AND JAIL AT KINGSTON, OR THE ROCKWOOD ASYLUM,

In connection with the Provincial Penitentiary, is situated on the north shore of Lake Ontario, near the village of Portsmouth, at or about one-third of a mile beyond the Penitentiary, and one and a half miles, westward, from the City of Kingston.

It is of coursed cut-stone, and comprises a central portion and two wings, which are connected with the central block, and present a front of 351 feet. The whole is covered with a tinned steep-pitched roof.

The east and west wings are each 39 feet wide in front, 125 feet in depth, and four stories in height; the central block is 67 feet wide in front, 103 feet in depth, and four stories in height; the connecting portions between this block and the wings on either side are each 103 feet in length upon the front by 43 feet wide in depth, and three stories in height.

The site for this building was purchased in 1856 from the heirs of the late Judge Cartwright; the stone buildings which were upon the property were appropriated to the accommodation of the Medical Superintendent, and as a prison for a limited number of female criminal lunatics, in order to relieve the overcrowded portion of the Penitentiary from this class of prisoners.

The Lunatic Asylum was constructed chiefly by means of convict labor, under the superintendence of the late William Coverdell, architect, of Kingston, until his decease in 1865, since which time the works have been conducted by Mr. Power and the son of the late architect; it was commenced in 1859, and was first occupied about eighteen months ago.

The only outlay incurred by the Department on account of this Asylum was in 1856, '57 and '58, when a sum of $4,293.92 was expended for professional services of Messrs. Lawford & Nelson, architects, and petty disbursements. The cost of the edifice amounts to about $280,000.

TEMPORARY ASYLUM FOR FEMALE LUNATICS, TORONTO.

The following paragraph in relation to this building, is from the Public Works Report for 1856:—" In consequence of the overcrowded state of the Provincial Lunatic Asylum in this city, it became necessary, during the past year (1856), to provide accommodation for about 80 female lunatics. This was effected by an expenditure of about £2,622 ($10,488.00), upon the premises known as the " Old University Buildings." Its imperfect drainage had to be remedied; the decayed floors relaid; the roof repaired and coated with water-proof composition; wire guards fixed to the windows; airing yards enclosed, and water and gas introduced. Such arrangement, however, is considered but temporary, and can be dispensed with, so soon as the auxiliary Lunatic Asylum, for which funds have been appropriated, is built." This building will be vacated as soon as the wings of the Provincial Lunatic Asylum of Toronto, now in course of construction, are completed.

The total outlay incurred for this building in 1856 and 1857, amounts to £2,665 10. 8d. ($10,662.13).

COURT HOUSES.

THE OLD DISTRICT COURT HOUSE, QUEBEC,

Is a plain stone building with a tinned roof, situated at the corner of St. Lewis street and the Place d'Armes, on the south side of the English Cathedral, and measuring 120 feet along its façade, which is upon the north side of St. Lewis street, and 87 feet in breadth, with a projection of 55 feet by 10 feet, built of brick, at the rear; its height is 42 feet in front and 55 in the rear.

Adjoining the main building there is a shed of coursed stone masonry, 101 feet in length, 15 feet in width, and two stories high, with a tinned roof.

The lot upon which these structures stand, has an area of 20,300 feet; it forms part of the site once belonging to the Recollet Fathers, and upon which, under the reign of Louis XIV., they commenced the erection of their church and monastery, on the 14th July, 1693, as shewn by a metal plate, which was dug up on the 23rd of July, 1824, in levelling the grounds of the Place d'Armes.

The church and monastery which were erected on the spot now occupied by the English Cathedral and part of the Place d'Armes, were destroyed by fire in 1796.

The Court House was commenced some time afterwards, and finished at a cost of $120,000, in 1804, since which time it has been kept in repair, and partly improved.

Before this edifice was constructed, the Law Courts were held in the Jesuits' College, now called the Jesuits' Barracks, opposite the French Cathedral; the foundation of this College was laid in December, 1635; in 1640 the Jesuits' College and church were destroyed by fire, after which the college only was rebuilt.

DISTRICT COURT HOUSE, THREE RIVERS.

The site upon which this building is erected, is at the north-west corner of Rue des Champs and Prison street.

The building measures 97 feet in front, opposite Rue des Champs, and 54 feet in breadth, opposite Prison street.

It is two stories in height above the basement, which comprises a series of arched vaults, and it is built with rubble-stone walls, clapboarded on the north-east and north-west sides, and plastered on the other sides, in imitation of cut-stone, with a tinned roof.

The precise date of its construction has not been ascertained, but I am informed that it coincides nearly with that of the Jail, which was built in 1817.

This building has been kept in repair since the time of the Union in 1841, and has been improved by the addition of a portico, which was completed last year.

THE SHERBROOKE COURT HOUSE—DISTRICT OF ST. FRANCIS,

Is a brick building, two stories in height, with a roof covered with soldered tin, and measuring 114 feet in length by 28 feet in breadth.

It is located in the Town of Sherbrooke, upon a lot 190 by 238 feet, and containing 45,220 square feet.

In 1841, a sum of $2,880 was expended, under the Inspector General, for repairing this building; and in 1848 a further expenditure was incurred under the Department of Public Works, to the amount of $4,099.53, for the introduction of Prowse's heating apparatus into the vaults where the records were kept, also for the tinning of the roofs, and other repairs.

In 1859, the woodwork of the building was thoroughly repaired and partly renovated, and the roof was re-covered with tin, at a cost of $3,225, and some trifling repairs have been made since.

The total expenditure for repairs on this building, under this Department, up to the 1st July, 1867, amounts to $3,614.90.

OLD DISTRICT COURT HOUSE, MONTREAL.

This Court House, which was destroyed by an incendiary on the 18th of July, 1844, was situated upon the site of the present Court House, between Notre Dame street and the Champ de Mars, near Jacques Cartier square. The fire was discovered by a gentleman returning from the theatre, at half-past one on the morning of the 18th.

It was a stone building of some magnitude, two stories in height, with a basement, and consisted of a central block, with a pediment and two wings fronting on Notre Dame street.

After its destruction by fire, the old jail, then occupied as barracks by the military, was vacated by them, and fitted up for the holding of the courts.

The *Hochelaga Depicta*, published in 1839, gives the following account of its early history:

" The Court House was built in the year 1800, under a Provincial Statute, passed the 3rd of June, 1799, by which the sum of £5,000 was appropriated for its erection. The ground upon which it stands was formerly the property of the late order of Jesuits, and was granted by the Government, into whose hands it had fallen, without any pecuniary indemnity.

" The Commissioners for building it were Messrs. Davidson, Faucher, and Ross; treasurer, Mr. Richardson; builder, Mr. François Xavier Davelin. * * * Underneath are six vaults, where the notarials of deceased notaries are deposited."

The amount expended under the Department of Public Works upon this building, from the time of the union in 1841 to the time it was burnt, amounted to $2,428.10.

THE NEW DISTRICT COURT HOUSE, MONTREAL,

Is a cut-stone structure of the Ionic order, situated between Notre Dame street and the Champ de Mars, near Jacques Cartier square.

The site upon which it stands contains 70,918 superficial feet, and forms part of the property which belonged formerly to the order of Jesuits, and which was occupied by the former Court House and Jail.

The building is 295 feet in length, 106¾ feet in breadth, and two stories in height above the basement, and is covered with a tinned roof; its main entrance from Notre Dame street is through a projecting protico, 75½ feet in length, and 22½ in breadth, raised upon cut-stone arches, and surmounted by a pediment, resting on six cut stone fluted columns on the outside, and a corresponding number of pilasters on the inside.

It was commenced in 1851, handed over to the prothonotaries on 1st May, 1856, and completed on the 1st of February, 1857 at a cost of £74,142 5s. 11d. ($296,569.18), including

£7,000 ($28,000) for furniture and fittings, under the superintendence of Messrs. Ostell and Perrault, the architects who furnished the design.

Various improvements and alterations to the building and surrounding grounds have been made since the time of completion, in February, 1857.

The total expenditure upon this building for works chargeable to construction, up to the 1st July, 1867, amounts to the sum of $308,083.57, in addition to which a sum of $30,591.83, has been expended in extraordinary repairs up to the same date.

The expense of building this Court House was not taken from the consolidated revenue fund, but was provided for by an Act passed, 13th and 14th Vic. cap. 94.

LOWER CANADA.

County Court Houses erected under Act 20 *Vict., Chap.* 44.

The following is a list of the Court Houses erected by the various Counties of Lower Canada, with the aid of Government.

COUNTY.	DISTRICT.	Date of completion.
Temiscouata	Kamouraska	June, 1860.
Saguenay	Saguenay	
L'Islet	Montmagny	do
Montmorency	Quebec	
Bellechasse	Montmagny	November, 1859.
Dorchester	Beauce	December, 1862.
Lévis	Quebec	
Megantic	Arthabaska	December, 1860.
Compton	St. Francis	March, 1859.
Lotbinière	Quebec	December, 1862.
Wolfe	St. Francis	
Portneuf	Quebec	
Richmond	St. Francis	September, 1859.
Stanstead	do	
Nicolet	Three Rivers	
Drummond	Arthabaska	December, 1859.
Champlain	Three Rivers	
Shefford	Bedford	June, 1861.
Knowlton (Brome)	do	June, 1859.
Bagot	St. Hyacinthe	
Yamaska	Richelieu	March, 1860.
St. Maurice	Three Rivers	1858.
Maskinongé	do	November, 1859.
Berthier	Richelieu	December, 1864.
Rouville	St. Hyacinthe	March, 1859.
Iberville	Iberville	March, 1861.
Verchères	Montreal	November, 1859.
L'Assomption	Joliette	March, 1860.
Montcalm	do	September, 1859.
Chambly	Montreal	
Laval	do	1858.
Hochelaga	do	do
Jacques Cartier	do	do
Laprairie	do	
Napierville	Iberville	June, 1859.
Chateauguay	Beauharnois	1859.
Terrebonne	Terrebonne	December, 1862.
Argenteuil	do	
Vaudreuil	Montreal	December, 1859.
Soulanges	do	September, 1859.
Huntingdon	Beauharnois	December, 1859.
Pontiac	Ottawa	

The dates marked for completion are those on which the last payments were made by the Government.

For expenditure, see following statement, signed by J. Baine, book-keeper.

COUNTY COURT HOUSES, 20 VIC., CH. 44.

No.	NAME.	Amount of Grant.	Amount of Grant paid.	Interest paid.	Total Amount paid.	Amount of Interest 10th June, 1857, to 10th June, 1867.	Amount of Interest paid.	Total Amount due.	Date of payment.
		$	$	$ cts.	$ cts.	$	$	$	
1	Temiscouata	1,200	1,200		1,200 00				June, 1860.
2	Saguenay	1,200				720		1,920	
3	L'Islet	1,200	1,200	137 59	1,337 59				do
4	Montmorency	1,200				720		1,920	
5	Bellechasse	1,200	1,200		1,200 00				Nov., 1859.
6	Dorchester	1,200	1,200	366 97	1,566 97				Nov., 1864.
7	Lévis	1,200				720	360	1,560	
8	Megantic	1,200	1,200		1,200 00				Dec., 1860.
9	Compton	1,200	1,200		1,200 00				March, 1859.
10	Lotbinière	1,200	1,200	362 76	1,562 76				Dec., 1862.
11	Wolfe	1,200				720	72	1,848	
12	Portneuf	1,200				720	648	1,272	
13	Richmond	1,200	1,200	157 02	1,357 02				Sept., 1859.
14	Stanstead	1,200				720		1,920	
15	Nicolet	1,200				720	648	1,272	
16	Drummond	1,200	1,200	180 00	1,380 00				Dec., 1859.
17	Champlain	1,200				720		1,920	
18	Shefford	1,200	1,200		1,200 00				June, 1861.
19	Knowlton (Brome)	1,200	1,200		1,200 00				June, 1859.
20	Bagot	1,200				720		1,920	
21	Yamaska	1,200	1,200		1,200 00				March, 1860.
22	St. Maurice	600	600		600 00				1858.
23	Maskinongé	1,200	1,200		1,200 00				Nov., 1859.
24	Berthier	1,200	1,200	418 25	1,618 25				October, 1864.
25	Rouville	1,200	1,200		1,200 00				March, 1859.
26	Iberville	1,200	1,200	264 61	1,464 61				March, 1861.
27	Verchères	1,200	1,200		1,200 00				Nov., 1859.
28	L'Assomption	1,200	1,200		1,200 00				March, 1860.
29	Montcalm	1,200	1,200		1,200 00				Sept., 1859.
30	Chambly	1,200				720		1,920	
31	Laval	600	600		600 00				1858.
32	Hochelaga	600	600		600 00				do
33	Jacques Cartier	600	600		600 00				do
34	Laprairie	1,200				720		1,920	
35	Napierville	1,200	1,200		1,200 00				June, 1859.
36	Chateauguay	1,200	1,200		1,200 00				do
37	Terrebonne	1,200	1,200	390	1,590 00				Dec., 1862.
38	Argenteuil	1,200				720		1,920	
39	Vaudreuil	1,200	1,200	72 00	1,272 00				Dec., 1859.
40	Soulanges	1,200	1,200		1,200 00				Sept., 1859.
41	Huntingdon	1,200	1,200		1,200 00				Dec., 1859.
42	Pontiac	1,200				720		1,920	
43	Quebec	600	600		600 00				1859.
		48,600	33,000	2,349 20	35,349 20	9,360	1,728	23,232	

Signed, J. BAINE,
Book-keeper.

JAILS AND PRISONS.

OLD DISTRICT JAIL, QUEBEC.

A. D.
MDCCCX.
L. A. Reg. Georgio III.,
Prov. Gub. D. D. J. H. Craig, Bi. Eqte.,
Carcer iste bonos a pravis,
Vindicare possit.

This Jail, which bears the above inscription, is situated between St. Stanislas, Ste. Anne, Ste. Angèle and Dauphiné streets, in the Upper Town, where it occupies 18,500 square feet of ground.

It was erected in 1810 by the Provincial Government, from a design by Mr. François Baillairgé, architect, of Quebec, at a cost of $60,000, and was first occupied in 1814.

This building consists of a main corps, three stories high, measuring 140 feet in length, and 42 feet in depth, with a projection in the front of 60 feet by 13 feet, and three small wings in the rear of 12 feet by 6 feet; behind it stands the prison for females, which is 36 feet by 34 feet, and three stories in height; the guard-house adjoining the jail, is 34 feet by 31 feet, and two stories high.

The outside walls of these structures are of rubble stone masonry, and the roofs are covered with tin.

A new jail having been erected outside of the city, from 1860 to 1867, the old one was sold on the 16th October, 1861, for a sum of $12,000, to the Trustees of Morrin College, who were put in possession of the old jail, on 8th Aug., 1867, as previously agreed on.

The following notes respecting the first prisons of Quebec, are taken from *Hawkins' Picture of Quebec*:—

"Under the early French Government, the Public Prison was situated in rear of the old Palace of the Intendant, which stood on the beach of the River St. Charles, on the site of the present Queen's wood yard, outside Palace Gate; this Palace was destroyed by fire on 5th January, 1713, after which it was rebuilt, destroyed a second time by fire in 1726, and a third time by the Americans under General Arnold in 1775.

"In 1784, the vacant apartments of the Recollet Convent were used as a place of temporary restraint for prisoners; the Common Gaol was kept in part of the range of buildings, which in 1834 adjoined the artillery barracks at the east end."

THE NEW DISTRICT JAIL, QUEBEC,

Has been constructed from a design prepared by Mr. Charles Baillairgé, architect, of Quebec, in conformity with the requirements of the Prison Inspectors. It is situated on the Bonner property, near the Plains of Abraham, on the north-east bank of the St. Lawrence, at about one mile beyond Lewis gate.

When this property was purchased, it comprised two houses (one of which has since been used as an Observatory) and three lots, viz.:—

Lot No. 1, containing 46 arpents, 31 perches, 196 feet, French measure, formerly belonging to J. Bonner, and purchased at Sheriff's sale in 1854, for the sum of £5,277 10s. ($21,110), out of which £1,002 10s. ($4,010) was reimbursed to the Government, by parties to whom part of the land had been previously sold by Mr. Bonner.

Lot No. 69, measuring 35 feet in front by 70 feet in depth, English measure, belonging formerly to Charles Fitzpatrick, and purchased at Sheriff's sale in 1855, for £130 ($520).

Lot No. 2, measuring 35 feet in front and 80 feet in depth, English measure, purchased from Widow Codville, in 1856, for £220 ($880). The total cost of the property purchased thus amounts to £4,625 ($18,500), and the quantity of land now belonging to the Government is about 32 superficial arpents.

The site having been considered objectionable by the Military authorities, on account of the interference of the proposed jail with the City Defences, its construction was deferred until a later period.

This difficulty having been afterwards settled, the contract for the central portion, part of the south wing adjoining it in the rear, and for the east wing, was signed on the 31st of January, 1861, by Messrs. Thomas Joseph Murphy and Thomas M. Quigley, for a sum of $64,000.

Operations were commenced the same year, and continued until the 1st of January, 1864, when they were afterwards resumed in the month of April following, and continued until the completion of the works above enumerated, on 1st June, 1867, at which time the expenditure amounted to $137,932.12, on account of additional work, &c.

The new jail, in its present unfinished state, contains 138 cells, or one half of the number contemplated when the building is finished, by the addition of the west wing; 70 single and 27 double cells, or 97 in all have been reserved for male prisoners, and 41 for female prisoners.

It now consists of a central block, 88 feet by 50 feet, four stories high, an eastern block adjoining this one, of 50 feet by 48 feet, three stories high; an east wing, at right angles with the latter, and in which the cells are constructed, measuring 47 feet in breadth by 108 feet in length, and three stories in height; a wing, with water closets of 21 × 26 feet, three stories, on the east side of the east wing; and a south wing, or rear extension of the central block, wherein are located the chapels for the prisoners, measuring 66 by 40 feet, and three stories in height.

The outside walls are of coursed rock-work masonry of stone, the interior divisions are of brick work, and the roof is covered with tin.

The building was handed over to the Sheriff on the 1st of June, 1867.

THE DISTRICT JAIL, THREE RIVERS,

Which was constructed in 1817, stands on a lot lying between Haut-roc, St. François Xavier and Prison streets, south-eastward of the court house.

It measures 97 feet in front, opposite Haut-roc street, and 47 feet in breadth, opposite St. François Xavier street, and is capable of accommodating about 75 prisoners.

It is three stories in height above the basement, and is covered with a tinned roof; the outside walls are of rubble stone masonry, with the exception of the "façade," which is of rough hammer-dressed coursed work,—the base course, quoins, lintels and coping of the entire building, are of cut-stone.

This jail has been kept in repair by the Department, since the time of the Union.

The total sum expended on repairs and improvements to the jail and court house at three Rivers, from the time of the Union, in 1841, to the 1st of July, 1867, amounts to $4131.19.

THE SHERBROOKE OLD JAIL, DISTRICT OF ST. FRANCIS,

Is a brick building, 57 feet by 26 feet, three stories in height, situated upon a lot 134 feet in length by 101 feet in breadth, containing 13,534 square feet, on Montreal street in the Town of Sherbrooke.

The principal expenditure by this Department upon the above-named building, was that of $2,518, from 1841 to 1849, and of about $325 in 1859, for repairs.

In 1860, this jail was in such a dilapidated condition, that the Architect of the Department recommended that it should be condemned, and a new one built.

THE SHERBROOKE NEW JAIL, DISTRICT OF ST. FRANCIS,

Is a cut-stone building, with inside division walls of brick, situated in the rear of the court house, on a lot measuring 250 feet by 150 feet, and containing an area of 37,500 feet.

It consists of a main block of 39 feet by 49½ feet, two stories high on the front and three on the rear—and of a left wing of 40½ feet by 44½ feet, three stories in height.

On the 19th of August, 1865, the Government exchanged the site of the old jail with the Corporation of the Town of Sherbrooke, for the site of the new jail; and on the 28th of August of the same year, a contract was signed by Charles Coté for the construction of this building, for a sum of $24,977. This work was not completed on 1st July,

1867. The central portion and the wing occupied as a Jail by the male prisoners is completed; the wing intended for female prisoners is not yet constructed; in its present state about 40 prisoners may be accommodated.

THE OLD DISTRICT JAIL, MONTREAL,

Was a two-story stone building, with a central portion and pediment, crowned by a small dome, and a wing on either side, facing Notre Dame street on the front and the Champ de Mars on the rear.

It stood on a portion of the site occupied by the present court house.

The early history of the old jail is given as follows, by the *Hochelaga Depicta:*—

"This edifice, standing near the old Court House, was also built on ground belonging formerly to the Jesuits. The first Jail, built on the same spot, was destroyed by fire, in 1803. The present building was erected in the year 1806, in virtue of a Provincial statute passed on the 25th of March, 1805, by which, also, a sum of £9,000 was voted for the purpose. Mr. Joseph Courcelles dit Chevalier was the builder. After the new Jail was erected, the old prison was occupied, for one year, as the House of Industry; and on the 12th of May, 1838, possession was relinquished, and it was immediately occupied by the Government as barracks."

In 1844, the military had to vacate the building, and it was fitted up for the use of the law courts, shortly after the old court house was destroyed by fire.

The old jail continued to be used as a court house until the fall of 1849, after which, it was demolished, to clear the site for the new court house, and the law courts were removed to the old Government House.

The expenditure, under the Department, upon this building, up to 1849, amounted to $4,824.40, from the time of the Union, in 1841.

THE NEW DISTRICT JAIL, MONTREAL,

Together with the guard-house, outbuildings and yards in connection with it, is situated within a walled inclosure, upon a lot purchased from the heirs of the late Sir John Johnston, and containing an area of 10.61 acres. This lot is on the south side of St. Mary street, the continuation of Notre Dame street, in the Quebec suburbs, near the eastern limits of the city of Montreal.

The Jail presents a front of 240 feet, and consists of a central block and three wings, with outside walls of coursed cut-stone masonry: one of these wings is on the north-east side; the other on the south-west side; and the third at the rear of the central block.

The central block is 60 feet in length, 49 feet in breadth, and four stories in height, with a pediment and a basement. The north-east wing is 90 feet in length, 38 feet in breadth, and four stories in height, exclusive of the attic and basement. The south-west wing is 90 feet long, 30 feet wide, and three stories high between the attic and basement. The central wing is 64 feet long, 30 feet wide, three stories high, besides an attic and a basement.

The building is supplied with water, and is heated by means of stoves and of a steam-engine, for which 400 cords of hard firewood are generally required each year.

It was designed by Mr. Blaiklock, of Quebec, in 1825, and constructed under Mr. Wells, of Montreal, between the years 1830 and 1840; in 1836 it was handed over to the Sheriff, being then partly completed. The cost of construction up to 1840 amounted to about $104,000, which sum was provided by a vote of the Legislative Assembly of Lower Canada.

In 1852–3, the north-east wing, which was of the same width as the south-east wing, was widened from 30 to 38 feet, and the interior portion of the wing was demolished and rebuilt on a different plan, at a cost of about $15,000.

The total expenditure incurred by the Department upon the jail, from the time of the Union (10th February, 1841) to the 1st July, 1867, for improvements and repairs, amounts to $22,354.07.

The number of prisoners that have been confined in this jail has varied for several years past from 300 to 450 in a single year, whereas it is not adapted for the reception of more than 300 at any time. In winter, it is sometimes overcrowded to such an extent that three or four prisoners have to be confined in one small cell.

Increased jail accommodation was recommended in the Departmental Report of 1862, and a plan prepared for that purpose in 1863, by the undersigned, under the direction of the Prison Inspectors. According to this plan the central wing was to be extended, by the addition of a stone building, 104 feet in length, 46 in width, and four stories in height, with 160 night cells of 3 feet by 8 feet; the construction of the proposed extension has not been decided on as yet.

THE REFORMATORY PRISON FOR LOWER CANADA,

Which was destroyed by fire on the 7th of August, 1864, is now being rebuilt.

It is situated on a lot containing about 61 superficial arpents, in the Village of St. Vincent de Paul, on Ile Jésus, 10 miles northward from the City of Montreal.

The design for the reconstruction of this prison was prepared under the direction of the Prison Inspectors.

When the building is completed it will contain 240 single cells, 12 cells for solitary confinement, and 18 dark cells; it will comprise a central block, measuring 76½ by 40½ feet, and four stories in height; two wings adjoining the central block, and measuring 57 by 48 feet, and three stories in height; two pavilions, one next to each wing, measuring 30½ by 49 feet, and three stories in height; and two wings, each of which is 100 feet in length by 45 feet in breadth, with three tiers of cells for dormitories, situated at the rear of each pavilion. One of these wings, containing 120 cells, and workshops, has been completed; one of the pavilions, the right wing and the central portion of the building, is in course of construction. The outside walls are of coursed stone masonry, the inside division walls of brick, and the roof is covered with tin.

The work was commenced in 1865, and will be completed in about two years, at the present rate of progress.

The outlay incurred on the reconstruction of this edifice, up to the 1st of July, 1867, amounts to $70,950.96; the amount estimated for its completion is about $63,000.

The works connected with the establishment were formerly executed by the prisoners, under the immediate control of the Warden of the Prison, who acted under the general orders of the Prison Inspectors. They are now executed under the general charge of the department, by day labor, so as to admit of the employment of prisoners, according to an Order in Council of February 4th, 1865.

The building originally used for this prison, and the outbuildings in connection with it, such as the bakery, laundry, stable, shed, barn and lodge-house, were formerly occupied by the Nuns of the Sacred Heart, and were purchased, together with the land, on the 27th of December, 1861, from the "Fabrique de St. Vincent de Paul," for the sum of $18,000. The building used as the prison was 119 feet in length and 53 feet in breadth, with two wings of 25×29 on the front, and two wings of 20×20 feet in the rear, and two pavilions of 9×10, all constructed of stone; this is the portion of the property that was destroyed by fire, the remainder having been only partly damaged, and since restored.

COURT HOUSES AND JAILS COMBINED.

THE PERCÉ COURT HOUSE AND JAIL

Is situated in the Village of Percé, in the County and District of Gaspé, 443½ miles below Quebec, by the land route, and 140 miles from the Magdalen Islands.

The building here which is occupied as a court house and jail is a stone structure, two stories in height, and measuring 36 feet in length upon the front by 35½ feet in depth.

The Jailer's apartments and the jail, consisting of three cells, are in the lower story, and the court house in the upper story.

It stands upon a lot of land bounded eastward, or in front, by the main street of the village; westward, or in rear, by another street, separating it from the property of John LeBouthillier; northward, by the property of Widow Tremblay, and southward by the property of John T. Moriarty. This lot measures 66 feet in width upon the main street, 77½ feet on the line of the back street, and 935⅔ feet in length, along the southern boundary, between the jail lot and the property of the said John Moriarty.

This structure, which was originally intended for a private dwelling is not at all suited for the purpose to which it has been adapted; it requires to be enlarged and reconstructed.

On the 15th November, 1860, plans and estimate were furnished for the improvement of this building, and the construction of a wing of 39 × 44 feet, for the use of the jail.

Nothing, however, has been done beyond a small expenditure in 1860, for repairs, to the amount of $343.85.

THE NEW CARLISLE COURT HOUSE AND JAIL

Is situated in the Village of New Carlisle, in the County of Bonaventure and District of Gaspé, upon the south side of the Baie de Chaleurs, 379½ miles below Quebec, by the land route.

This edifice was erected in 1814; it is constructed of stone and measures 48½ feet in length by 32⅙ feet in breadth, and two stories in height.

The Jailer's apartments and the jail consisting of four cells, are in the lower story, the court house is in the upper story.

The jail and jail yards are enclosed by a stone wall, 120¾ feet in length and 80½ in width, and 10½ feet in height.

The site occupied by the jail and adjoining grounds, is situated between the Main street in front, Roy street in the rear, and a street on each side, and measures 417.42 feet in length by 417.42 feet in depth, thus comprising an area of four acres.

On the 15th November, 1860, plans and an estimate were furnished for the improvement of this building, and the construction of a wing of 39 feet by 44 feet for the use of the jail.

Nothing, however, has been done since then, beyond a small expenditure of $113.12, for repairs in 1863.

The building, in its present state, is not at all adapted to the double purpose for which it is used.

THE DISTRICT COURT HOUSE AND JAIL, KAMOURASKA,

Is a two story rough stone building, with brick wall divisions inside, situated in the Village of St Louis de Kamouraska, upon a lot of 1½ arpents in superficies and measuring 74 feet by 32 feet.

After the District of Kamouraska was established, under the Act 12 Vic. cap. 38, 30th of May, 1849, the private dwelling of the late Hon. Jean Taché was acquired from him by the Government on the 31st May, 1850, for a sum of £1,500 ($6,000), for the purpose of a jail and court house, into which it was converted, in the years 1850 and 1851, at a cost of $8,850.40, inclusive of $6,500 paid for the property.

This building was afterwards enlarged by the addition of a new wing of stone masonry, which was commenced in 1859, and completed in 1861, at a cost of $11,740.

It was partially destroyed by fire on the 9th December, 1862; the works for its restoration were put under contract on 1st December, 1863, and completed on 1st February, 1865; the amount expended for the restoration of the building and other necessary works up to 1866, amounted to about $7,830.

The expense of constructing this edifice was not charged to the consolidated revenue, but was provided for by loan on debentures, issued under authority of 12th Vic , cap. 112; the interest and principal of which are chargeable upon a duty or tax upon all proceedings in the court house of this District. This jail is provided with 13 single cells, designed for the same number of prisoners.

THE OLD DISTRICT COURT HOUSE AND JAIL, ST. HYACINTHE,

Which was formerly occupied as a court house and jail, was kept in repair by the Department, until a new one was provided in 1862.

From 1841 to 1849, the sum expended for repairs on the old building amounted to $2,180.93; a further sum of $490 was spent in 1860 for repairing the old court house, which was destroyed by fire whilst the repairs were in progress, on the 23rd of August of that year.

THE DISTRICT COURT-HOUSE AND JAIL, AYLMER,

Is situated in the Village of Aylmer, on the north side of Lake Chaudière, 7 miles west of Ottawa City.

It is of coursed cut-stone masonry, with a tinned roof; is two stories in height above the basement, and measures 90 feet in length by 43 feet in breadth, exclusive of a wing in the rear containing the jail, measuring 23 feet by 30 feet.

It was commenced in 1850, was ready for the transaction of business at the close of 1852, and was completed in 1854, at an outlay of £6,485 17s. 7d. ($25,943.52), including the cost of the enclosure walls and furniture.

This expenditure was provided for by loan, on debentures issued under authority of 12th Vic., cap. 112, the interest and principal of which are chargeable upon a duty or tax upon all proceedings in the court at Aylmer.

The outlay for repairs up to the 1st of July 1867, amounts to $2083.76.

NEW DISTRICT COURT HOUSES AND JAILS,

Erected under the Judicature Act for Lower Canada, 20 Vic., cap. 44, and the Act 22 Vic cap 5.

Under the Judicature Act applicable to Lower Canada (20 Vic., cap. 44) twelve new districts were set off in 1857, viz.: Rimouski, Saguenay, Montmagny, Beauce, Arthabaska, Richelieu, Bedford, St. Hyacinthe, Joliette, Iberville, Beauharnois and Terrebonne.

By a subsequent Act, 22 Vic., cap. 5, the District of Saguenay was divided and a new one created, namely: Chicoutimi. Shortly afterwards it was determined to erect a local court house and jail at Amherst, the most important of the Magdalen group of islands, and possessing one of the best harbors; formerly these Islands were judicially attached to the County of Gaspé; they are situated in the Gulf of St. Lawrence, at about 140 miles from Percé, the *chef-lieu* of that county.

According to the first-named Act, the municipality of the county in which the *chef-lieu* of each district was situated, selected and furnished sites free from all encumbrances, for the erection of each court house and jail; as soon as the sites were approved by His Excellency, authority was given to the Department to place the several buildings under contract; they were commenced in 1859 and 1860, and completed in 1861 and 1862, excepting that at Amherst Island, which was commenced in 1861, and another at Malbaie, which was completed in 1863.

Most of these buildings are constructed of coursed cut-stone masonry, and are covered with tinned roofs.

They are built, generally, according to the same design, and are all two stories in height. The design was prepared by F. P. Rubidge, Esq., Architect of the Department, in accordance with the requirements of the Prison Inspectors.

They consist of a main corps on the front, occupied by the law courts, and a wing in the rear, with eight single cells and eight double cells, for the confinement of prisoners.

The location, dimensions, date of construction, and cost of each building, are shewn by the subjoined statements, Nos. 1 and 2.

The outlay for the construction, fitting and furnishing of all the jails and court houses named therein, was charged to the Municipal Loan Fund.

On completion, they were all transferred to the Sheriffs of the respective districts.

Each building was insured in the name of the Sheriff of each district, for a sum of $12,000, excepting the one at Amherst (Magdalen Islands), which was insured for $6,000.

On the night of the 26th and 27th July, 1865, the court house and jail at Ste. Scholastique were destroyed by fire, and three female prisoners perished in the flames. The Royal Insurance Company, with whom the building had been insured for $12,000, paid the amount immediately after the fire, since which the building has been reconstructed. It was completed and ready for occupation on the 20th of January, 1866.

No. 1.—STATEMENT shewing the Location, Dimensions, Description, Date of construction, &c., of the New District Court Houses and Jails of Lower Canada, erected under the Acts 20 Vic., cap. 44 and 22 Vic., cap. 5.

No.	DISTRICT.	CHIEF-LIEU.	COURT HOUSES.			JAILS.			DESCRIPTION OF		Commenced.	Completed.	Area of land attached to each Building.
			Dimensions.		Stories in height.	Dimensions.		Stories in height.	Building.	Roof.			
			Length.	Breadth.		Length.	Breadth.						
			Feet.	Feet.		Feet.	Feet.						
1	Gaspé (Magdalen Islands)..	Amherst Island........	30	40	2	(Main Building for the whole)			Rubble masonry..	Tinned	1861...	Sept. —, 1862..	2 arpents.
2	Rimouski........	St. Germain de Rimouski	90	45	2	52	36	3	Cut-stone..	Shingled...	1859...	Sept. 15, 1862..	4 do
3	Chicoutimi......	Chicoutimi	90	45	2	52	36	2	do	do ..	1859...	Mar. 17, 1862..	4 do
4	Saguenay	St. Etienne de la Malbaie	90	45	2	52	36	2	do	do ...	1859...	Nov. —, 1863..	3 do
5	Montmagny.....	St. Thomas	90	45	2	52	36	3	do	Tinned	1859...	July, 1, 1862..	4 do
6	Beauce............	St. Joseph de la Beauce	90	45	2	52	36	3	do	do ...	1859...	Sept. —, 1862..	4 do
7	Arthabaska	St. Christophe..........	90	45	2	52	36	3	C. H. Brick, Jail, cut-stone.........	Shingled	1859...	Dec. —, 1861..	4 do
8	Richelieu	Sorel	90	45	2	52	36	3	do	do ...	1860...	Jan. —, 1862..	4 do
9	Bedford	Nelsonville (Sweetsburgh)	90	45	2	52	36	3	do	do ...	1859...	Jan. —, 1862..	4 do
10	St. Hyacinthe..	St. Hyacinthe...........	90	45	2	52	36	3	Cut-stone..	Tinned	1860...	June 16, 1862..	4 do
11	Joliette...........	Industrie	90	45	2	52	36	3	do	do ...	1860...	Jan. —, 1862..	4 do
12	Iberville	St. John.................	90	45	2	52	36	3	do	do ...	1859...	Feb. 5, 1861..	4 do
13	Beauharnois ...	St. Clément...............	90	45	2	52	36	3	do	do ...	1859...	Jan. —, 1862..	4 do
14	Terrebonne......	Ste. Scholastique	90	45	2	52	36	3	do	do	1859, Burnt, 1865.	.............1862, Rebuilt, January, 1866 ...	4 arpents

Nos. 3, 5, 7, 8, 9, 11, 12, 13, 14 were transferred to the Sheriffs of the respective Districts in 1861, and Nos. 1, 2, 4, 6, 10, in 1862.

No. 2.—STATEMENT shewing the Amounts expended on construction of the new District Court Houses and Jails of Lower Canada, erected under the Acts 20 Vic., cap. 44, and 22 Vic., cap. V, up to 1st July, 1867, and charged to the Municipal Loan Fund.

No.	DISTRICT.	CHEF-LIEU.	Time of completion.	Construction.	Fitting up.	Total Cost.
				$ cts.	$ cts.	$ cts.
1	Gaspé (Magdalen Islands)	Amherst Island	Sept., 1862..	9,944 51	240 20	* 10,184 71
2	Rimouski	St. Germain de Rimouski...	do ..	32,551 68	882 73	33,434 41
3	Chicoutimi	Chicoutimi..........................	March, 1862..	29,687 01	736 89	30,423 90
4	Saguenay..........................	St. Etienne de la Malbaie...	Nov., 1863..	894 93	....	† 894 93
				40,045 34	1,483 29	41,528 63
5	Montmagny........................	St. Thomas	July, 1862..	33,469 33	854 13	34,323 46
6	Beauce	St. Joseph de la Beauce	Sept., 1862..	27,810 26	861 06	28,671 32
7	Arthabaska	St. Christophe......................	Dec., 1861..	29,990 97	1,491 63	31,482 60
8	Richelieu	Sorel	Jan., 1862..	27,531 15	1,264 91	28,796 06
9	Bedford	Nelsonville (Sweetsburgh)..	do ..	26,340 49	939 55	27,280 04
10	St. Hyacinthe	St. Hyacinthe.......................	June, 1862..	34,087 03	897 80	34,984 83
11	Joliette	Industrie	Jan., 1862..	31,297 27	849 38	32,146 65
12	Iberville	St. John.................................	Feb., 1861..	26,093 89	789 57	26,883 46
13	Beauharnois	St. Clément	Jan., 1862..	30,422 62	808 95	31,231 57
14	Terrebonne.........................	Ste. Scholastique	1862..	28,473 71	1,338 32	29,812 03
			Reconstruction after fire, Jan., 1866.........	15,561 22	....	15,561 22
				424,201 41	13,438 41	437,639 82

* $2,009 82 of the above amount paid out of general appropriations for arbitrations and awards.
† $8,145 69 do do

The enclosure walls of the New District Court Houses and Jails are not yet constructed; on this account it is impossible to give employment or outdoor exercise to the prisoners.

THE DISTRICT COURT HOUSE AND JAIL OF ALGOMA,

Is being erected on a lot reserved for that purpose in the Town of Sault Ste. Marie, at the foot of Lake Superior, and containing about 3 acres.

It is two stories in height, with outer walls of stone masonry, and inner division walls of brick, and measures 60 feet by 43 feet, with a front projection of 44 feet by 13 feet.

The first contract for the erection of this building, entered into about 1861, was for a cheap wooden structure, for which $4,000 were appropriated; this work was commenced in the spring of that year, but having been condemned by the officer in charge, it was abandoned by the contractor in 1862.

At the request of the Board of Prison Inspectors, it was afterwards determined to erect the stone building now in course of construction, a contract for which was signed, on 10th October, 1865, for the sum of $15,780.

The Algoma court house and jail are expected to be completed this year.

The court house and jail accommodation at this place has been hitherto provided in buildings leased from private parties and fitted up for such purpose, for which a private building still continues to be occupied.

NORMAL SCHOOLS.

THE LAVAL NORMAL AND MODEL SCHOOLS, QUEBEC.

See old Château St. Louis, at page 253 of Appendix.

THE JACQUES CARTIER NORMAL AND MODEL SCHOOLS,

See old Government House, Montreal, at page 254 of Appendix.

THE McGILL NORMAL AND MODEL SCHOOL, FORMERLY THE MONTREAL HIGH SCHOOL,

Is a stone building measuring 185 feet in length and 63 feet in breadth, and situated at the corner of Belmont and Lagauchetière streets, on a lot containing an area of 49,131 superficial feet; it was completed in 1845, under the direction of John Ostell, architect, of Montreal.

In virtue of the Act 14 & 15 Vic., cap. 57, an Order in Council, dated 13th August, 1852, was passed, authorizing the Department to purchase the High School for a sum not exceeding $18,000, which sum was to be paid out of the Jesuits' Fund.

The purchase was effected that year, and an arrangement was afterwards made with the authorities of McGill College, for repairing and fitting up the building for a sum of $10,516, so as to convert it into a Normal and Model School for the Protestant portion of the population of Lower Canada.

The building was opened for instruction on the 3rd of March, 1857, the day on which the McGill Normal School was inaugurated.

THE TORONTO NORMAL AND MODEL SCHOOL

Is situated in an open square of about 7½ acres of ground, between Church and Victoria streets, and is bounded on the north by Gerrard street, and on the south by Gould street.

The square was purchased in August, 1850, from the Hon. Peter McGill, of Montreal, by the Council of Public Instruction, for the sum of £4,500 ($18,000.)

The first grant given by the Legislature for the establishment was $60,000, to which a further sum of $40,000 was added in 1852.

The corner-stone of this building was laid on the 2nd July, 1851, by His Excellency the Earl of Elgin.

For further details see the *Hand-book of Toronto*, before referred to, and from which the above information is taken.

This building, although constructed by the Government, is not under the management of the Department of Public Works.

DRILL SHEDS, GUN SHEDS AND BARRACKS.

THE QUEBEC DRILL SHED

Is situated a short distance outside of Lewis Gate, on a lot of ground which was ceded to the Province by the Imperial Government, and measures 255 feet by 240 feet, equal to 61,200 feet superficial.

It is of wooden frame-work, and measures 222 feet in length by 84 in breadth.

This shed is fitted with a lodging for the keeper; and an armory is supplied with gas and water for the use of the Provincial Militia.

The contract for the erection of this building was signed on the 15th December, 1863, and the work completed in December, 1864, at a cost of $8,453.21.

THE QUEBEC ARMORY AND GUN SHED,

Is a stone building, two stories in height, with a hammer-dressed front, and a brick wing, also two stories in height—the whole covered with a tinned roof.

The main building measures 146 feet by 24 feet, and the wing 98 feet by 20 feet.

The site on which it stands is in the rear of "Sewell's Building," formerly the office of the Postmaster General, opposite the Esplanade, near Lewis Gate.

The building was constructed in 1856, and improved in 1857 (at a cost of $4,406.11), for the safe keeping of the guns with their carriages, tumbrels, etc., belonging to the Volunteer Artillery of Quebec.

Part of the upper floor of the building is fitted up as a dwelling for the person in charge, and the remainder as an armory for the arms of the Volunteer Rifle Companies.

THE WATER STREET BARRACKS, MONTREAL,

Are situated opposite the St. Lawrence. They are sometimes called the Quebec Gate Barracks, on account of their situation near the spot where stood the gateway of the old French fortifications, at the entrance of the Quebec suburbs.

In the time of the French, this property belonged to a nunnery.

After the cession of Canada to the British, the convent and other buildings were converted into barracks.

In 1822, these were improved and enlarged, so as to accommodate about 1,000 men.

The only expenditure made by the Provincial Government on these barracks, was in 1850–51, for a sum amounting to $1,421.13.

THE CAVALRY BARRACKS, MONTREAL,

Were also repaired in 1850–51, by the Provincial Government, at an outlay of $2701.88.

THE OTTAWA GUN SHED,

Is a stone building, two stories in height, situated on the west side of the Rideau Canal near one of the locks at its lower entrance, and belonging formerly to the Ordnance Department.

It was fitted up as a gun shed, in 1857, at a cost of $515.10.

THE TORONTO GUN SHEDS,

Together with a large space planked for drill purposes, and fenced around, are situated on Bathurst street, upon the premises known as the Bathurst Street Barracks.

The following is a description of each of the buildings, viz.:

A structure of one story, measuring 72 by 40 feet, erected for the reception of the four-gun field battery, with its tumbrels, &c., belonging to the Volunteer Artillery Company of Toronto, commanded by Major Dennis.

A separate building of one story, and adjoining the one above, built for a harness room.

And a third building, 100 feet in length, constructed for the shelter of artillery horses, &c.

All these structures are of wood. They were commenced in 1856, and completed in 1857, at an outlay of $3,592.23.

THE TORONTO BARRACKS—NEW FORT.

By the Act 18 Vic., c. 91, of 30th May, 1855, Provincial Parliament, Her Majesty's Secretary of State for the Colonies having informed His Excellency the Governor General that the Imperial Government was willing to surrender to the Province all the Ordnacne property and all Naval and Military reserves thereon, except such portions thereof at Kingston, Montreal and Quebec, as were essential to the Military defence of the Colony by

Her Majesty's troops, on condition that the Provincial Government would make ample provision for the maintenance of peace and order in the Province; His Excellency the Governor General was authorized to accept such transfer, by an Order in Council, on such terms and conditions as might be agreed upon between the principal officers of Her Majesty's Ordnance and the Governor in Council.

The lands were to be divided into three classes, viz.:—Class A, to include lands in Kingston, Montreal and Quebec, retained for occupation by Her Majesty's troops; Class B, lands, &c., to be retained for the defence of the Province; and Class C, lands, &c., which may be sold, leased or used, as the Governor in Council may deem advisable.

The Toronto Barracks having been placed in Class B, have since been kept in repair, together with the road and footway leading thereto, by this Department, at a cost of $2,257.69, up to the 1st July, 1867.

THE HAMILTON GUN SHED,

For which a site was purchased in 1856, for the sum of $1,104, is situated on Nelson street; it is a brick building, measuring 140 by 36 feet, and was erected in 1857–58, at a cost of $5,510.82, including the purchase of the site.

MISCELLANEOUS BUILDINGS.

THE SEWELL PROPERTY, QUEBEC,

Which was purchased for a Nautical School, is situated on St. Lewis street, opposite the Esplanade, near Lewis Gate, on a lot containing 31,000 square feet.

It comprises a two-story stone building, measuring 51 by 52 feet, with a wing of 24 by 12 feet, constructed of brick, and covered with a shingled roof, and was purchased for the sum of £5,189 8s. 3d. ($20,757.65), in 1854.

The project of converting this building into a Nautical School having been abandoned in 1858, it was made use of for some time by the Volunteer Corps of Quebec. In 1859, it was fitted up, at a cost of $2,623.72, for the Department of the Postmaster General, who occupied it until the removal of the Seat of Government from Quebec to Ottawa, in the fall of 1865. It is at present occupied by Sir N. F. Belleau, Lieutenant Governor, and the Executive of the Province of Quebec.

THE WATER POLICE STATION, QUEBEC.

Is a brick building of 23 feet by 35 feet, one story high, with a tinned roof, on the south side of the Old Custom House, upon a lot containing 2,110 superficial feet.

During the occupancy of the old custom house premises by the Corporation of Quebec, permission was granted by them to Dr. Hall, to erect a building upon a portion thereof, on condition that he should remove it on receiving three months' notice to do so without compensation.

This building having been found necessary for the accommodation of the Water Police, in 1852, at which time the old custom house, hitherto partly occupied by them, was resumed by the Goverment for the use of the Nautical School, it was purchased for a sum of $600, under an Order in Council, dated 31st of March, 1852 (No. 1,095). It was afterwards fitted up for the use of the Water Police force, at a cost of $473.50, the same year, since which they have continued to occupy it.

THE GEOLOGICAL MUSEUM, MONTREAL.

Opposite the west end of the Champ de Mars, is a plain cut-stone edifice, three stories high, 61 feet in length by 43 feet in depth, with a brick wing in rear 53 feet in length by 15 feet in depth.

It is covered with a truncated roof, which is tinned on the slopes, and it is heated by Gould's patent low-pressure steam heating apparatus.

This property was leased by the Government in 1844–5–6, and part of 1847, from the late Hon. Peter McGill, and the rent was paid by the Inspector General, as follows, viz., £133 6s. 8d. in 1844; £200 in 1845; £200 in 1846, and £66 13s. 4d. in 1847.

In the course of the last mentioned year, it was purchased for a sum of £5,000 ($20,000); in 1853–54 and 55, it was altered, repaired, and improved, at an expense of $3,972.23.

When the Seat of Government was in Montreal, this building was occupied chiefly by the Crown Lands Department; it is now occupied by the offices of Sir William Logan, the Provincial Geologist, who uses it, also, as a Geological Museum.

THE BUILDINGS AT THE CORNER OF NOTRE DAME STREET AND JACQUES CARTIER SQUARE, MONTREAL,

Are situated on two lots of ground adjoining each other, upon the west side of the property belonging to the old Government House. The lot at the north-east corner of Notre Dame street and Jacques Cartier square, measures 100 feet in length by 97½ feet in depth, and was purchased from F. W. & H. Desrivières, on the 12th July, 1849, for the sum of £4,000; the building on this lot is 100 feet in front on Notre Dame street, 47½ in breadth upon Jacques Cartier square, and 1½ stories in height, with outside walls of rough stone, and a shingled roof.

The lot on Jacques Cartier square, and next to the south side of the one just described, measures 100 by 60½ feet, and was purchased from the "The Royal Institution for the Advancement of Learning" on the 13th October, 1858, for the sum of £2,320; upon this lot there is a stone building, 50½ feet in length along its front on the square, by 41 feet in depth, with a wing in the rear, 21 feet wide and 59 feet long.

The property acquired from the Desrivières was occupied by Government offices up to 1863, when it was leased to Thos, Wilson, merchant, as a warehouse, up to 30th April, 1865; it was then resumed by the Government and fitted up for the military engineers engaged on the fortifications of Montreal. The other property, formerly known as "Mack's Hotel," is occupied by the Montreal police force.

THE LAPRAIRIE BANAL MILL

Is situated in the Seigniory of Laprairie de la Madeleine, in the Jesuits' Estate which belongs to the Government, and is under the management of the Crown Lands Department.

This mill was repaired and improved by the Department of Public Works in 1848 and 1849.

The description and cost of the work done, under the various contracts given, were as follows, viz:—

26th Oct., 1848.	Gibaut & Thompson, masonry................	£292	17	6
1st Nov. "	Wm. Burry, machinery for grist, flour, oatmeal and barley mill..................	882	0	0
16th " "	Reid & Houston, dam and raceway.........	300	0	0
22nd " "	Gibaut & Thompson, carpentry.............	147	5	6
22nd May, 1849.	Joseph Simard, stable and sheds	85	10	0
	Total cost of work done...........................	£1707	13	0 or $6830.60

THE MECHANICS' INSTITUTE, TORONTO,

Is situated on the corner of Wellington and John streets, and was occupied formerly as the office of the Receiver General.

This building was leased to the Government in 1855, before it was finished, on condition that it should be completed at their expense; the Government having failed to do so, they afterwards allowed a sum of $16,000 for its completion in 1860.

GENERAL REMARKS.

The Provincial Penitentiary and Criminal Lunatic Asylum at Rockwood, near Kingston—the Lunatic Asylum of Toronto—the Lunatic Asylum of Orillia, on Lake Simcoe—the Reformatory Prison at Penetanguishene, and other buildings, in Upper Canada, have been purchased, improved or constructed by the Government.

The Jails and Prisons of Upper Canada have been constructed by the Municipalities with the aid of the Government.

They are all provided with enclosure walls, which are generally wanting in the prisons of Lower Canada.

As these buildings are not under the control of the Department of Public Works, no description of them is given in this report, except in the case of the Lunatic Asylum at Rockwood, near Kingston, where a small expenditure was made for the professional services of the architects who furnished the design of the building.

I have the honor to be, Sir,
Your obedient servant,

G. F. BAILLAIRGÉ,
C. E.

APPENDIX No. 24.

(No. 731.)

REPORT BY F. BUTEAU, MANAGER.

DESCRIPTION OF PROVINCIAL STEAMERS, AND REPORT ON SERVICES RENDERED BY THE SAME.

Office of the Provincial Steamers,
Quebec, 2nd September, 1867.

F. Braun, Esquire,
Secretary, Department of Public Works.

Sir,—I have the honor to transmit, for the information of the Honorable Commissioner, the Report of this Establishment, respecting the Provincial Steamers.

These steamers consist of the S.S. *Lady Head*, *Napoleon III* and *Queen Victoria*, built of iron with screw propellers, also the *Advance*, built of wood with side paddle wheels.

During the season of navigation, from 1st July, 1866 to 30th June, 1867, these steamers were employed in supplying the light houses, and provision depôts in the Gulf and River St. Lawrence, laying down and keeping in position the buoys, and surveying the channel with the apprentice pilots and officers of the Quebec Trinity House, in accordance with the statute to that effect, the carrying of passengers, mails and freight, between Quebec and the lower ports, rendering assistance to wrecked and disabled vessels, and towing at advanced seasons of navigation.

The following synopsis contains a description of the Provincial Steamers, and shews the special service performed by each of them.

S.S. *Lady Head*, built of iron, at Govan, Scotland, by Messrs. R. Napier and Sons, in 1857, is schooner rigged 151.15 feet long; 24.01 feet main breadth; 13.04 feet hold; 299.21 gross tonnage; 168.6 registered tonnage; has two oscillating engines of a combined power of 150 horses, also built by Messrs. R. Napier and Sons. She is propelled by a screw propeller. Her boilers have been retubed, and new bottoms put in during the winter. Her furniture and rigging being in good condition, and having been throughly overhauled in dry dock, this steamer is considered almost equal to new.

She made fourteen round trips to Pictou, Nova Scotia, calling at Father Point, Gaspé, Percé, Paspebiac, Dalhousie, Chatham and Shediac, and latterly at New-Castle; carrying the mails, passengers, troops, freight and exploring parties to the Mines at the Moisie River. She also brought up from Gaspé to Father Point, the mails and species, taken off the wrecked S.S. *North American*.

S.S. *Napoleon III*, built of iron, at Govan, Scotland, by Messrs. R. Napier and Sons, in 1856, is schooner rigged, 173 feet long; 30 feet main breadth; 16.56 feet hold; 494.65 gross tonnage; 211.98 registered tonnage; has two oscillating engines of a combined power of 300 horses, also built by Messrs. R. Napier and Sons. She is propelled by a screw propeller. Her boilers having been retubed, a new frame or entablature made for the engines, her furniture and rigging being in good condition, and having been thoroughly overhauled in dry dock, last spring (after some slight repairs to bottom of boilers, next winter), this steamer may also be considered nearly equal to new.

She was sent to Montreal on 28th April, 1866, for a new engine frame, and returned on 15th August. The S.S. *Union*, running between Quebec and Pictou, having become disabled, the *Napoleon III*, at the request of a large number of disappointed passengers and shippers, made a trip in her place, carrying the mails, passengers and a full cargo of freight. During her absence on this trip, after landing passengers and freight, she proceeded to St. George's Bay, Newfoundland, to save the wrecked ship *Hengist*, and safely towed her, in a water logged condition, into Pictou, on 29th September. She left for the Straits of Belle-Ile with light house and provision supplies in the service of the Quebec Trinity House, and returned on 15th October. On the 8th November, in accordance with a requisition of the Quebec Board of Trade and by order of the Honorable Commissioner of Public Works, she was dispatched to the Gulf of St. Lawrence to assist up the river any belated or distressed vessels at that advanced season of navigation, and found, bound for Quebec, the barque *Fergus*, dismasted, and towed her up from below Pointe des Monts to Quebec, thus enabling her to reach her destination, unload and repair, and again proceed to sea before the final close of navigation. After taking up the last of the buoys and light ship, she went into winter quarters on the 7th December.

On the 14th June 1867, she was dispatched to the assistance of the disabled Steamer *Secret* and towed her up from Dalhousie to Quebec. On the 22nd June, she proceeded on her voyage to Straits of Belle-Ile with light house and provision supplies, and called at the south point of the Isle of Anticosti to render assistance to the wrecked S.S. *North American*, and brought to Gaspé the mails and specie, which were forwarded to Father Point per S.S. *Lady Head*, to meet the next steamer for Liverpool. Subsequently, she towed her up from Gaspé, (where she had been left by the S.S. *Austrian* and *Rocket*) to Quebec.

She also carried down Mr. Whitcher, Head of the Fisheries Department, and several other gentlemen, proprietors of fishing rights.

Steamer *Advance*, built of wood, at Quebec, in 1853, by Mr. John Wilson, 164.4 feet long; 26.8 feet main breadth; 11.2 feet hold; 373.34 gross tonnage; 235.31 registered tonnage. One walking beam engine of 150 horses power and propelled by side paddle wheels. She will require a new hull and other wooden works. The engine, boiler, furniture and rigging are in good condition.

During seasons of navigation, she is employed in supplying light houses, lays down and keeps in position the buoys and beacons of the Lower St. Lawrence river, surveys the channel with the officers of the Trinity House and apprentice pilots, and tows vessels. She also makes a regular weekly trip to Metis, calling at St. Denis, Eboulements, River du Loup and Rimouski, with passengers and freight, thus affording the inhabitants of those isolated places, quick communication with Quebec, &c., and the means of bringing to market produce, cattle, &c. The traffic has greatly increased, and the people lose no opportunity of expressing the appreciation of the benefits conferred upon them by Government affording them this mode of communication.

S.S. *Queen Victoria*, built of iron, at Govan, Scotland, by Messrs. R. Napier and Sons, in 1856, is schooner rigged, 173 feet long; 30 feet main breadth; 16.56 feet hold; 494.65 gross tonnage; 211.98 registered tonnage; has two oscillating engines of a combined power of 300 horses, also built by Messrs. R. Napier and Sons. She is propelled by a screw propeller.

On 17th June, 1866, she made a trip to the Straits of Belle-Ile, in the place of the S.S. *Napoleon III*, then undergoing repairs at Montreal.

On the 10th September, she was chartered to Mr. T. C. Duplessis, for a voyage with a cargo of Canadian produce for Cuba, and on her way back foundered at sea on 4th October, 1866.

I have the honor to be, Sir,

Your very obedient servant,

F. BUTEAU,

Manager.

GENERAL STATEMENTS

SHEWING THE

Quantity of Water Power and other Property
Leased on Canals, &c., at....... ....Appendix No. 25,

Also the Roads, Bridges and Harbors Sold,
Leased, or otherwise disposed of, at......Appendix No. 26,

And the Public Buildings and Lands Leased,
Purchased, &c., at..........................Appendix No. 27.

APPENDIX

LACHINE CANAL.—STATEMENT of Water Power,

Date of Lease.	Form of Lease.	LESSEES.	Water Lots, &c.	Situation of Lots.	For what purpose used.	Area of Lots.
Feb. 1, 1854	5 years.	Wm. Tate	3 old locks.	Montreal Terminus.	Ship repairing	No ground but the locks.
Mar. 13, 1851	21 years.	Geo. & Wm. Tate.	Dry dock & ship yard.	S. side of Canal	Saw mill	5 arp. 15 per., French.
July 28, 1856	do	Frothingham & Workman.	No. 1 & N. E. ½ of 2.	At Basin No. 2, S. side of Canal	Store, warehouse and coal yard.	120 feet front, down to river, a road (Mill st.), 40 ft., reserved.
Sept. 23, 1854	do	W. P. Bartley	No. S.W. ½ 2, 3, 4, 5, 6, 7	do	3, 4, Finishing shop and saw mill 5, Iron foundry 6, Blacksmith's shop 7, Boiler shop	80 feet front each, road 40 ft., reserved.
Sept. 7, 1849	do	James Harvey	No. 8	do	Storehouse and elevator.	80 ft. front, road reserved.
Mar. 15, 1851	do	Thos. Peck & Co. (formerly Jas. Harvey).	E. ½ No. 9	do	Wood yard	22¼ perches
Mar. 15, 1851	do	Thos. Peck	W. ½ No. 9.	do	Spike and nail factory	do
Mar. 10, 1848	do	Thos. Peck	No. 10	do	do	80 ft. front, road reserved.
Oct. 16, 1848	do	James McDougall	No. 11	do	Grist mill and store	do
May 28, 1847	do	Ira Gould (form'ly Thorne & Heward)	Nos. 12, 13.	do	Flour, grist mill and store	160 feet front, road excepted.
May 27, 1847	do	Ira Gould	No. 14	do	do	80 ft. front, road excepted.
Feb. 25, 1851	do	Thos. D. Bigelow & Co	No. 15	do	Spike and nail factory	44½ per., French
Feb. 15, 1851	do	Holland & Dunn (now T.F. Miller)	No. 16	do	do	do
Mar. 1, 1851	do	W. Lyman & Co. (now Lymans, Clare & Co.)	No. 17	do	Oil mill, grinding drugs, paint, &c.	43 per., French.
Mar. 11, 1851	do	Grant, Hall & Co.	Nos. 18, 19.	do	Saw mill, planing factory.	90 do
Mar. 5, 1851	do	Augustin L'Abbé.	Isl'd No. 5.	Between old & new Canals, above St. Gabriel's Lock.	Marine slip	

No. 25.

and of Building and other Lots Leased to Various Parties.

Amount of Water Power Leased.	Date from which Lease is reckoned.	Annual Rental.	Terms of Payment.			REMARKS.
			Amount of each instalment.	When first instalment became payable.	When payable each year.	
		$	$			
Sufficient water to bring vessels in locks.	Feb. 1, 1854	440	220	July 1, 1854	July 1, Jan. 1	1st instalment to be £45.16.8. Lease expired.
4 runs.........	Jan. 1, 1851	1000	500	July 1, 1852	Jan. 1, July 1	The interests of Geo. Tate were sold by Sheriff to Thos. Leith, on 17th Oct., 1860. The interests of Wm. Tate were sold by Sheriff to Benj. Grant, on 23rd May, 1862.
None.........	June 1, 1855	656	328	July 1, 1855	July 1, Jan. 1	1st instalment to be £13.13.8.
12 runs on lots 5, 6, 7, none on 2, 3, 4.	Jan. 1, 1854	1290 1128	645 564	July 1, 1854	July 1, Jan. 1	Sold by Sheriff to Trust & Loan Co., 29th Mar., 1864. Jas. McDougall purchased from T. & L. Co. No. 5 and ½ of No. 6 (with 4 runs), on 25th April, 1864. Thomas Peck purchased from T. & L. Co. ½ of Nos. 6 and 7 (with 4 runs).
4 runs.........	Nov. 23, 1846	430	215	Nov. 22, 1849	May 22, Nov. 22	
Privilege of using 2 runs when same can be spared.	Jan. 1, 1851	110	55	Oct. 1, 1851	April 1, Oct. 1	To pay £13.2.6. for each run of stone whenever used. Sold by Sheriff to Jonathan Findlay, 27th June, '65. Transferred by latter, 19th July, '65, to Thos. Peck & Co., who were acknowledged as lesees on 5th March, '66, by the Government.
None.........	April 1, 1851	110	55	Oct. 1, 1851	April 1, Oct. 1	
4 runs.........	Nov. 23, 1846	430	215	May 22, 1848	May 22, Nov. 22	
4 runs.........	Nov. 23, 1846	430	215	Nov. 22, 1848	May 22, Nov. 22	
8 runs.........	May 1, 1847	864	432	Oct. 1, 1847	Oct. 1, April 1	
4 runs.........	May 1, 1847	432	216	Oct. 1, 1847	Oct. 1, April 1	With special condition respecting sluices, for supply of water to Lots Nos. 12, 13 and 14.
4 runs.........	Jan. 1, 1851	430	215	Jan. 1, 1852	Jan. 1, July 1	
4 runs.........	Jan. 1, 1851	430	215	Jan. 1, 1852	Jan. 1, July 1	Dissolution of Holland & Dunn's partnership, 3rd Sept., '52. Transfer by M. Holland to Hersey & Holland, 6th Jan., '58. Transfer by Hersey & Holland, to Thos. F. Miller, 9th Feb., '59. Com'r P.W. notified by T. F. Miller, Feb. 1, '66.
4 runs.........	July 1, 1851	430	215	Jan. 1, 1852	Jan. 1, July 1	
8 runs.........	Jan. 1, 1851	860	430	Jan. 1, 1852	Jan. 1, July 1	
None.........	Jan. 1, 1851	100	50	July 1, 1851	Jan. 1, July 1	

APPENDIX No. 25.—LACHINE CANAL.—STATEMENT of Water Power,

Date of Lease.	Form of Lease.	LESSEES.	Water Lots, &c.	Situation of Lots.	For what purpose used.	Area of Lots.
Feb. 14, 1851	21 years.	Young & Gould.. ..... (*principal lessees*)	Surplus water.	Lock No. 3, or St. Gabriel's Lock, both sides.	Barrel factory, &c.........	See Remarks.
		Sub-Lessees.				
May 30, 1853	These Lots are sub-let to these parties, by Young & Gould, principal lessees.	1. Augustin Cantin...	....	....	Canada Marine Works.....	... .
		2. Redmond & Co.....	....	Lot at St. Gabriel's Lock.	Foundry & machine shop	....
		3. F. W. Harris........	....	do	Cotton factory and wadding mill.	....
		4. R. Scott....	....	do	Edged tool works..........	. ...
		5. Montreal Rub'erCo	....	do	Rubber factory........	....
		6. J. W. Weaver......	....	do	Woollen manufactory	....
		7. A. W. Ogilvie & Co	....	do	Grist mill......................	....
		8. Burry & Co.........	....	do	Foundry & machine shop	....
		9. J. & D. Smith......	....	do	Thrashing machine shop..	....
		10.				
		11. Ira Gould	....	do	Barrel factory, chiming and crozing machine.	....
		12. J. & F. McGauvran	....	do	Saw mill....................	....
		13. J. A. Converse	....	do	Cordage factory and plaster mill.	....
		14. James Shearer	....	do	Door and sash factory.....	....
		15. Wm. Allen......... .	....	do	Chair and bedstead do.....	....
		16 and 17. John Ostell	....	do	Door and sash factory and saw mill.	....
Aug. 4, 1860	21 years.	William Parkyn........ (*principal lessee*).	....	Lot at Lock No. 4, Côte St. Paul (S. side Canal)	....3 acres 9 $\frac{8}{10}$ per.	English ..
		Sub-Lessees.				
		1. J. J. Higgins	Lot A...	At Lock No. 4, Côte St. Paul.	Axe factory....................	....
		2. Wm. Parkyn........	do B...	do	Shovel do.................. ...	....
		3. S. & J. Dunn	do C...	do	Nail do	....
May 1, 1859	....	Hamilton & Gildersleeve	....	Lot at Basin No. 1.	Freight shed	....
May 1, 1859	Pleasure of Government.	M. K. Dickinson........	....	do	do	....
Sept. 7, 1864		American Line of Steamers (McCuaig).	....	do	do	....
July 2, 1866		St. Lawrence Navigation Co	....	do	do	....
Oct. 1, 1859		Moseley & Lewis	....	Water, at G. T. crossing, near Cantin, 3-inch pipe.	Tannery	....
		Joseph Levey	....	Lot	....	....
Oct. 29, 1862		B. Bowman (Trustees of Estate of late B. Bowman, viz.: G. W. Eaton, Ch. Bischoff, thro' W. McClymont	....	Lot near St. Gabriel's Basin, N. side Canal.	Lumber yard	....
Dec. 9, 1862		J. M. Currier & Co...	....	Lot near St. Gabriel's Lock.	do	....
Feb. 24, 1858	15 years.	Patrick Evers...........	....	*	Farming purposes.........	....

*Lot purchased by Government from heirs St. Germain and P. Boudria, at Côte St. Paul, north side and of Building and other Lots Leased to Various Parties.—*Continued.*

Amount of Water Power Leased.	Date from which Lease is reckoned.	Annual Rental.	Terms of Payment.			REMARKS.
			Amount of each instalment.	When first instalment became payable.	When payable each year.	
		$	$			
All surplus water disposable—not less than 20 runs.	Mar. 1, 1851	1680	840 00	July 1, 1852	Jan. 1, July 1	All the lands between City Limits, Montreal, and prolongation of Guy St., except the island formed by the Canal and portions already occupied.
2 runs........	....	....	....	....	....	
....	....	....	....	....	....	
....	....	....	....	....	....	
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....	....	....	....	....	....	
All surplus water—not less than 20 runs	Feb. 1, 1853	1601	800 50	July 1, 1853	Jan. 1, July 1	
....	....	....	....	....	....	
....	....	....	....	....	....	
....	....	....	....	....	....	
....	May 1, 1859	75	75	May 1, 1859	May 1, in adv..	New Canadian Inland Steam Navigation Co.
....	May 1, 1859	60	60	May 1, 1859	do ..	
....	——— 1864	20	20	At date of signature.	do ..	$10 paid for season of 1864.
....	May 1, 1866	20	20	do	do ..	
....	Oct. 1, 1859	10	10	Oct. 1, 1859	Oct. 1, in adv..	
....	....	40	....	....	....	
....	Oct. 29, 1862	200	200	Oct. —, 1862	July 1, in adv..	First instalment, $133; 2nd do., June 30, 1863, of $200.
....	Dec. 9, 1862	200	200	Dec. 9, 1862	do ..	First year's rent only $112.50.
....	Jan. 1, 1859	40	40	Jan. 1, 1859	Jan. 1..........	

of Canal and to River St. Pierre, except lot sold to Lachine R.R. Co., and also lot sold to G.T.R. Co

APPENDIX No. 25.—BEAUHARNOIS CANAL.—STATEMENT

Date.	Term of Lease.	LESSEES.	DESCRIPTION OF PROPERTY LEASED.				Area of Property.
			Situation and Nature.			For what purpose used.	
							A. R. P.
Feb. 23, 1856.	21 years..	T. F. Miller (now A. Buntin & Co.)	Ste. Cécile..	Hydraulic lots.	Nos. 1, 2, 3, E. side lower dam.	Paper Manufactory.	1 3 22
July 15, 1852.	do ..	Wm. Miller (now A. Buntin & Co.)	do ..	do ...	No. 4.........	do ..	3 15
May 16, 1856.	do ..	Stephen May......	do ...	do ...	No. 5..........	Grist Mill..	2 15
Dec. 21, 1861.	do ..	P. Poulin (formerly F. X. Poitras).	do ...	Hydraulic & building lots	Nos. 1 and 2, head of Canal. Nos. 1 and 2, Grande Isle.	Saw Mill...	107,400 English sq're feet.
							Feet.
——— 1863...	Pleasure of Gov't.	D. B. Pease........	St. Timothy..	Wharf lot.....	S. side of Canal, near St. Timothy Bridge.	....	82 x 32
Nov, 14, 1863.	do ..	Owen Lynch	do ..	do ...	do ...	....	110 x 36
do ..	do ..	do	do ..	do ...	do ...	House & 2 sheds.	110 x 30
do ..	do ..	W. Rodden (formerly L. Leduc)	do ..	do ...	do ...	....	108 x 38
May 13, 1857.	do ..	do ..	do ..	do ...	Above wharf, S. side of Canal.	House, shed, &c.	65 x 27
——— 1863...	do ..	Julien Sauvé......	Ste. Cécile...	do ...	At Big Basin, S. side of Canal.	....	88 x 36
Nov. 11, 1863.	do ..	Isidore Larocque.	do ...	do ...	Head of canal	....	140 x 30
Nov. 12, 1863.	do ..	St. Amour & Co..	do ...	do ...	do ..	....	100 x 30
Nov. 11, 1863.	do ..	J. Demers & Co..	do ...	do ...	do ..	....	100 x 30
Aug. 7, 1866.	do ..	Jos. Demers........	do ...	do ...	Basin (River side), above guard lock. N. side of Canal.	....	150 ft. long
Nov. 16, 1863.	do ..	A. Buntin & Co.	do ...	Lot for store..	Near No. 4, below guard lock. N. side of Canal.	....	490 x 70 feet

of Water Power and other Property leased to Various Parties.

Amount of Water Power. Run of Mill Stones.	Date from which Lease is reckoned.	Annual Rental.	TERMS OF PAYMENT.			REMARKS.
			Amount of each instalment.	When payable each year.	When first instalment was payable.	
		$ cts.	$ cts.			
2 runs for each.	Jan. 1, 1856	354 00	177 00	Jan. 1, July 1.	July 1, 1856...	Now A. Buntin & Co.
6 runs......	Jan. 1, 1853	318 00	159 00	do ..	do 1854...	Now A. Buntin & Co.
4 do	July 1, 1855	120 00	60 00	do ..	do 1856...	Now Trust and Loan Co. of Upper Canada.
12 do	Oct. 1, 1854	240 00	120 00	do ..	do 1862...	Only ½ of this rent payable until water is used on lot No. 2.
....	May 1, 1847	20 00	20 00	May 1, yearly (in advance).	May 1, 1847...	Refused to sign a lease on 13th Nov., 1863.
....	do ..	20 00	20 00	do ..	do 1847...	One year's rent to be deducted.
....	May 1, 1864	10 00	10 00	do ..	do 1864...	
....	May 1, 1848	20 00	20 00	do ..	do 1848...	Refused to sign this lease on 16th Nov., 1863.
....	....	No rent	mention	ed in Lease.....	.. ..	
....	May 1, 1857	20 00	20 00	do ..	do 1857...	Refused to sign this lease on 13th Nov., 1863.
....	May 1, 1859	20 00	20 00	do ..	do 1859...	
....	do ..	20 00	20 00	do ..	do 1859...	
....	May 1, 1861	20 00	20 00	do ..	do 1861...	
....	May 1, 1866	20 00	20 00	do ..	Paid August 7, 1866.	
....	July 1, 1859	45 00	45 00	July 1, yearly..	July 1, 1859...	Has two other lots free of rent.

APPENDIX No. 25.—CORNWALL CANAL.—STATEMENT

Date.	Term of Lease.	LESSEES.	DESCRIPTION OF PROPERTY LEASED.			
			Situation and Nature.			For what purpose used.
July 7, 1840	1 year..	Daniel Daily	Milleroches	Lots........	....	....
——— 1846	14 years.	Ronald McDonald	....	Mill Lot...	Near No. 4.........	....
——— 1846	Pleasure of Gov't	Whitcomb Kezar.	On his own property.	Wharf	....	Warehouse ....
Jan. 21, 1847	do	James N. Dixon...	On his own prop., opposite, Moulinette Church.	do	....	....
——— 1847	21 years.	Thos. Byrne......	....	Mill Lot...	No. 1, near No. 4.	....
May 10, 1847	Pleasure of Gov't	John Bell..........	Town of Cornwall	....	....	....
——— 1848	do	Peter Tait..........	On his own property.	Wharf	....	....
Feb. 29, 1848	21 years.	Wm. D. Wood.....	do ...	Surplus water.	Near Lock No. 18, north of Canal.	....
July 20, 1850	do	A. E. Cadwell.....	....	Mill Lot...	No. 6...............	Saw mill...........
Aug. 29, 1851	do	John Harvie (formerly M. Hitchcock, now Angus Bethune).	Opposite Town of Cornwall.	do ...	No. 6, S. of Canal	Grist & flour mill.
June 1, 1857	do	Hon. P. Vankoughnet (now Geo. Stephens).	Below Town of Cornwall.	do ...	No. 7...............	....
Jan. 12, 1861	do	B. G. French (now W. D. & G. C. Wood).	....	do ...	No. 1, north of Lock No. 20.	Flour mill..........
June 25, 1863	do	Andw. Elliot (now Andw. Hodge).	....	do ...	Nos. 3 and 4	Flour and grist mills.
June 27, 1863	Pleasure of Gov't	Henry Harrison..	Near Moulinette..	....	....	Permis'n to build a wharf on Lot 30, N. of Canal, for cordwood.

of Water Power and other Property leased to Various Parties.

Area of Property.	Amount of Water Power. Run of Mill Stones.	Date from which Lease is reckoned.	Annual Rental.	Terms of Payment.			REMARKS.
				Amount of each instalment.	When payable each year.	When first instalment was payable.	
			$ cts.	$ cts.			
....	....	....	Free............	....	....	....	
....	....	Mar. 3, 1847	1st run $80, each additional, $40.	....	Jan. 1, July 1	....	
....	....	Apr. 20, 1849	60 00	. ...	....	....	
....	....	....	Free............	....	....	....	On condition of protecting banks on all the front of property of the late Adam Dixon.
....	....	Mar. 3, 1847	200 00	....	....	....	He died in fall of 1847. Chas. Geddes, of Montreal, administrates his estate.
....	Water to his brewery, 2-inch pipe.	Aug. 23, 1846	10 00	....	....	....	
....	....	Apr. 18, 1848	20 00	....	....	.. ..	
....	4 runs......	Nov. 1, 1847	1st run $80, each additional $40.	....	April 1, Oct. 1	Oct. 1, 1848	
R. P. 2 $31\frac{64}{100}$	4 runs......	July 1, 1850	120 00	60 00	Jan. 1, July 1	Oct. 1, 1849	
2 25	4 runs......	Jan. 1, 1849	120 00	60 00	do	July 1, 1850	
....	20 runs....	June 1, 1857	Each run $30	....	April 1, Oct. 1	....	
$\frac{28}{100}$ of an acr.	10 runs.....	July 1, 1857	300 00	150 00	Jan. 1, July 1	July 1, 1859	
A. R. P. 1 1 $8\frac{2}{10}$	8 runs......	July 1, 1850	240 00	120 00	do	Jan. 1, 1851	
....	....	May 1, 1863	20 00	In advance	May 1............	Date of lease.	

APPENDIX No. 25.—WILLIAMSBURGH CANALS.—STATEMENT

Date.	Term of Lease.	LESSEES.	DESCRIPTION OF PROPERTY LEASED.			Area of Property leased.
			Section of Canal.	Nature of Property.	Situation.	
Mar. 1, 1849.	Pleasure of Gov't	N Empey............	Farran's Point.	Wharf lot	....	278 feet long.
do ..	do	John Walsh........	Rapide Plat ...	do	....	390 do
do ..	do	Jas. Holden.........	do ...	do	At Williamsburgh ..	202 do
Feb. —, 1852.	21 years.	Benj. Chaffey	do ...	Grist and flour mill lot.	Mill Street, along present wharf.	2 arp.$38\frac{3}{4}$ per.
——— 1847.	Not specified.	J. Wallace	Pointe Iroquois	Wharf lot	On his own property.	....
——— 1848.	1 year ...	Geo. Brouse........	do	do	At head of section..	....
Mar. 15, 1850.	Pleasure of Gov't	John S. Ross	do	do	....	217 feet long.
June 6, 1853.	21 years.	Wm. Elliot	do	Grist, flour and carding mill.	Below Matilda lock.	1 rood $38\frac{1}{7}$ perches.
Nov. 12, 1853.	do	John Molson, jr ..	do	Grist and flour mill.	At Matilda.............	....
——— 1861.	....	Alex. & W. Molson	do	Mill lot	do	....
Aug. 22, 1865.	21 years.	Philip Carman.....	do	Tannery (water for his).	Part of W. $\frac{1}{2}$ of lot No. 24, 1st concession, Matilda.	....
Aug. 30, 1865.	Pleasure of Gov't	Wm. Bailey	do	Wharf lot (No. 2).	In basin above lock No. 25.	100 x 40 feet
Mar. 15, 1866.	do	J. Henry Ross.....	do	Wharf lot (No. 1).	do do	100 x 40 feot.
——— 1847.	Not specified.	J. Méthot...........	Galops Canal...	Wharf lot	On his own property	....
Mar. 1, 1849.	Pleasure of Gov't	James Slorah......	do ...	do	Port Elgin.....	223 feet long.
do ..	do	K. McPherson.....	do ...	do	On his own property	100 do
do ..	do	Wm. McLaughlan	do ...	do	do do	344 do
——— 1852.	....	Wm. S. Aiken	do ...	do	....	....
——— 1861	....	Lawrence Byrnes..	do ...	do	....	....
Oct. 21, 1861	21 years.	Benson & Aspden.	do ...	Grist mill lot..	Part of Lot No. 5..	$32\frac{64}{100}$ per ...
Jan. 16, 1858.	Pleasure of Gov't	Mary Fraser........	Junction Canal	Piece of ground.	At Edwardsburgh...	....
Jan. 6, 1847.	For ever.	James Jessup......	Galops Canal...	Mills and machinery........	On his own property (Edwardsburgh) part of W.$\frac{1}{2}$ of No. 5, in 1st concession	....
		C. C. Farran........	Farran's Point.	....	....	....

HARBOR (AT

Feb. 28, 1848	21 years.	John Welch........	Port Whitby Piers	Lots A & B.	....	.... {
———	....	James Wallace...	do	Lot..........	....	....

of Water Power and other Property leased to Various Parties.

Amount of Water Power leased.	Date of Auction Sale or from which Lease is reckoned.	Annual Rental	Amount of each instalment	When due each year.	When first Instalment was payable.	REMARKS.
....	March 1, 1849	$ 12	$ 6	April 1, Oct. 1	April 1, 1849...	
....	do	44	22	do	do ...	
....	do	40	20	do	do ...	
6 runs.........	July 1, 1849	246	123	Jan. 1, July 1	Jan. 1, 1850...	
....	April 1, 1847	10	....	....	....	
....	April 1, 1848	40	....	....	....	
....	Mar. 15, 1850	50	25	April 1, Oct. 1	April 1, 1850...	He pays a rental of $1 for another wharf on his own property, since 25th April, 1849.
4 runs	Jan. 1, 1849	140	70	Jan. 1, July 1	July 1, 1851...	
4 runs.........	Jan. 1, 1852	140	70	do	July 1, 1852...	
....	Jan. 1, 1861	140	....	....	....	
4 runs.........	Jan. 1, 1865	140	70	July 1, Jan. 1	July 1, 1866...	
....	Aug. 30, 1865	20	20	Aug. 30........	Aug. 30, 1865...	
....	Dec. 1, 1865	24	24	Dec. 1........	Mar. 15, 1866...	
....	April 1, 1847	12	....	....	....	
....	Mar. 1, 1849	50	25	April 1, Oct. 1	April 1, 1849...	
	do	12	6	do	do ...	
....	do	12	6	do	do ...	
....	Jan. 1, 1852	12	....	....	Jan. 1, 1853...	
....	Jan. 1, 1861	12	....	....	....	
....						
4 runs or 40 horses.	Nov. 16, 1858	160	80	July 1, Jan. 1	Jan. 1, 1860...	Pays this amount as ground rent.
....	....	1	....	....	April 14, 1858...	
8 runs.........	....	Free...	....	....	....	This privilege appears to have been granted free of rent, and in consideration of the transfer by J. Jessup to government of certain lots of land, and of the release of a sum of £137 10s. awarded for damages to his property.
4 runs.						

PORT WHITBY).

A, 8000 sq. ft. B, 4400 do	}	Feb. 28, 1848	{$100 00 53 00}	76 50	April 1, Mar. 1	Sept. 1, 1848	
....	....	....	120 00	....	....	....	

APPENDIX No. 25.—WELLAND CANAL.—STATEMENT

Date.	Term of Lease.	LESSEES.	DESCRIPTION OF PROPERTY LEASED.			Area of Property leased.
			Situation.	Nature of Property.	For what purpose used.	
Jan. 1, 1851	21 years.	Robt. Laurie & Co.	P't Dalhousie	Mill lot at waste weir No. 1.	Grist mill.....	8,400 sq. feet.
Dec. 27, 1853	do	R. & John Laurie	do	do do	Flour mill.....	⅛ of an acre..
Mar. 8, 1856	do	do	do	Lot near waste weir No. 1	....	¼ do ..
Dec. 29, 1856	do	Geo. A. Clarke ...	do	Lot T'p Grantham, E. side of E. pier.	Wharf.........	....
Mar. 8, 1856	do	Alex. Muir	do	Lot near Lock No. 1	Floating d'ck	¾ do ..
Feb. 11, 1860	do	do	do	do do	Dry dock.....	¼ do ..
Mar. 10, 1859	do	W. Donaldson *et al*	do	Part of No. 21, 1st concession, Grantham.	do	6/10 do ..
Mar. 8, 1856	do	James Mavor......	do	Lot near lock No. 1......	....	2 perches.
Jan. 1, 1851	do	Reuben Morrison.	do	Lot near waste weir No. 1	Saw mill......	⅙ of an acre..
July 11, 1863	1 year & then during pleasure of govern't.	Geo. A. Clarke.....	do	Lot in village on E. side of lock No. 1.	Wood yard...	5,800 sq. feet.
Jan. 1, 1851	21 years.	John L. Ranney..	St. Catharines.	Surplus water at head of lock No. 2, W. side of canal.	Flour mill ...	....
June 16, 1851	do	Calvin Phelps	do	Surplus water from upper race and aqueduct to Red Mills.	do ...	....
June 20, 1854	do	do	do	Part of No. 16, 6th concession, Grantham, head of lock No. 4.	Wharf	¼ of an acre..
Feb. 23, 1855	do	do	do	Opposite lot No. 16, head of lock No. 4.	do	....
May 14, 1851	do	W. H. Merritt, King *et al.*	do	Between sluice, near Phelps mills, to old salt works and between locks Nos. 2 and 3.	Red mills.. ..	....
Dec. 27, 1863	Pleasure of Gov't	Michael Kerrins..	do	Part of lot No. 21, W. of canal, 5th con., Grantham, at lock No. 2.	....	480 sq. feet...
Jan. 1, 1851	21 years.	Richard Collier...	....	Part of No. 15, 7th con., Grantham, W. side of canal, near lock No. 5.	Saw mill... ..	2 R. 27 per.
Jan. 1, 1851	do	Thos. Towers......	....	Part of No. 13, 8th con., E. side, Grantham, near old locks 15 & 10.	Grist & corn crusher ...	1 R. 26 per.
Dec. 27, 1853	do	John Brown.........	....	Lot near waste weir No. 15	Stave factory	¼ of an acre..
do	do	W. B. Hendershot	....	In Grantham, opposite lock No. 20.	Saw mill	1 acre ....
Jan. 1, 1851	do	Wm. Beaty...	....	Part of No. 9, 10th con., Grantham, E. side of lock No. 21.	do	16,790 sq. ft.
do	do	do	....	Surplus water, head of lock No. 22.	Tannery	Owned by lessee.
do	do	Wm. H. Ward	....	Surplus water, head of lock No. 23.	Planeing machine.	Owned by Bank of U. C.

of Water Power and other Property leased to Various Parties.

Amount of Water Power.	Date from which Lease is reckoned.	Annual Rental	TERMS OF PAYMENT.		By whom occupied.	REMARKS.
			When due each year.	When first Instalment was payable.		
		$ cts.				
3 runs and water to propel one crusher.	Jan. 1, 1851	197 30	Jan. 1, July 1	July 1, 1851..	....	By Order in Council of July 16, 1864, a reduction of $10 in the yearly rent was made, & the water power leased for the corn crusher was resumed.
4 runs.........	July 1, 1853	240 00	do	Jan. 1, 1854..	....	
....	July 1, 1855	20 00	July 1, each year.	July 1, 1856..	....	
....	Dec. 29, 1856	80 00	Jan. 1, July 1	July 1, 1857..	....	
Sufficient for fl'ting dock	April 1, 1853	76 00	Oct.1, April 1	Oct. 1, 1853..	....	
Sufficient for dry dock.	July 1, 1858	100 00	Jan. 1, July 1	Jan. 1, 1859..	....	
do	do	100 00	do	do ..	....	
....	July 1, 1855	20 00	July 1, each year.	July 1, 1856..	J. Johnson........	
Water for 3 saws.	Jan. 1, 1851	137 00	Jan. 1, July 1	July 1, 1851..	Donaldson *et al*...	
....	April 1, 1863	20 00	do	July 1, 1863..	....	
6 runs.........	Jan. 1, 1851	260 00	do	July 1, 1851..	Bank of U. C.......	
6 runs.........	do	150 00	do	do ..	Norris & Neelan..	
....	Jan. 1, 1854	40 00	do	Jan. 1, 1855..	do ...	
....	....	....	....	....	do ...	No additional rent for privilege of driving two rows of piles in Canal.
All the surplus water.	Jan. 1, 1851	500 00	Jan. 1, July 1	July 1, 1851..	....	
....	Jan. 1, 1864	10 00	July 1, Jan. 1	July 1, 1864..	....	
Two upright saws.	Jan. 1, 1851	167 67	Jan. 1, July 1	July 1, 1851..	....	
2 runs and for a corn crusher.	do	140 00	do	do ..	Shannon & Co.....	
1 run..........	Jan. 1, 1853	160 00	do	Jan. 1, 1854..	Wait & Bros........	
3 saws	Oct. 1, 1852	181 00	do	do ..	....	
1 saw..........	Jan. 1, 1851	108 00	do	July 1, 1851..	....	
1 wheel.......	do	63 60	do	do ..	....	
2 lathes, 3 saws and 2 planeing machines,	do	50 00	do	do ..	....	

APPENDIX No. 25.—WELLAND CANAL—Statement of Water

Date.	Term of Lease.	LESSEES.	Description of Property Leased.			Area of Property Leased.
			Situation.	Nature of Property.	For what purpose used.	
Jan. 1, 1851	21 years.	Wm. H. Ward.....	....	Surplus water, head of lock No. 23.	Saw mill......	... .
May 12, 1862	do	Gordon & Mackay	....	Part of No. 12, in 9th con., Grantham.	Cotton factory.	7 acres ....
Aug. 14, 1854	do	John Brown.........	Thorold Vill.	East side, lot below lock No. 23.	Wharf and storehouse.	⅛ of an acre..
Jan. 1, 1851	do	Jacob Keefer	do	Surplus water, head of lock No. 24, W. side.	Flour mill ...	Owned by Bk. of U.C.
do	do	Brown & Ross.....	do T'p..	Part of No. 17, above lock No. 23, E. side.	do ...	12,000 sq. ft. owned by Bk. of U.C.
do	do	Freeman *et al*	do	Surplus water from locks Nos. 24 & 25, E. side.	do ...	....
do	do	Alex. Christy......	do	Surplus water from lock No. 25, E. side.	do ...	....
Dec. 27, 1853	do	John Brown	do Vill.	Lot in Village..............	Cement mill..	⅛ of an acre..
Jan. 1, 1851	do	McFarland & Abbey.	do T'p..	Part of No. 202, broken front.	Dry dock......	¼ do ..
do	do	Wright & Duncan	Allanburgh ..	Surplus water at lock, W. side of Village.	Flour mill ...	....
do	do	W. H. Merritt, jr.	do	do do	Saw mill......	Owned by lessee.
do	do	J. & A. Bowman..	do	do do	Pail factory..	do
do	do	Wm. Pennock	do	do do	Shingle do ..	do
July 1, 1863	2 years & then during pleasure of govern't.	Philip S. Mussen.	do	Lot on W. side of guard lock.	Store house...	12 sq. rods ...
Mar. 8, 1856	21 years.	J. & J. Abbey....	P't Robinson	Surplus water, old lock, E. side of Canal.	Dry dock	....
Jan. 1, 1851	do	Donaldson & McFarlane.	do	Part of No. 203, T'p Thorold, Chippewa Creek.	Grist mill.....	¼ of an acre..
do	do	Band, Elliott & Coleman.	do	Part of No. 203, T'p Thorold, Chippewa Creek (No. 15 in Village).	Storehouse lot.	¼ do ..
April 3, 1861	do	John Donaldson..	do	Part of No. 203, T'p Thorold, Chippewa Creek.	Wharf and storehouse.	4.304 sq. feet.
Jan. 1, 1851	do	Dunlop & Seeley..	Merrittsville..	Surplus water, N. of aqueduct and N. of Chippewa River.	Grist mill.....	....
Oct. 14, 1864	do	D. Killens & D. Dackstader.	do ..	Part of No. 26, 5th con., Crowland, W. of old aqueduct.	Saw mill......	1 R. 7 per.....
Jan. 1, 1851	do	Dunlop & Seeley..	do ..	Surplus water, W. of aqueduct and N. of Chippewa River.	do	....
Aug. 14, 1854	do	Ebenezer Seeley..	do ..	Lot, N. end of old aqueduct and another on S. end.	Wharf and storehouse.	⅛ of an acre..
Jan. 1, 1851	do	Moses Cook	do ..	Part of No. 25, 5th con., Crowland, Chippewa Creek.	Grist mill.....	½ do ..
Jan. 1, 1867	do	Hendershot Bros.	do ..	Two lots, part of No. 26, 5th con., Crowland, between old & new Canal, Sherwood Dock.	....	150 feet each.
Mar. 8, 1856	do	J. A. Hellems......	Junction Lo'k	Part of No. 26, 7th con., Crowland, W. side of Canal.	Wharf	⅕ of an acre..

Power and other Property Leased to Various Parties—*Continued.*

Amount of Water Power.	Date from which Lease is reckoned.	Annual Rental	Terms of Payment.		By whom occupied.	REMARKS.
			When due each year.	When first Instalment was payable.		
		$ cts.				
2 saws	Jan. 1, 1851	146 00	Jan. 1, July 1	July 1, 1851..	John McDonagh..	
All the surplus water of locks 12, 13 and 14.	July 1, 1860	240 00	do	July 1, 1861..	....	
....	July 1, 1853	40 00	do	Jan. 1, 1854..	....	
4 runs.........	Jan. 1, 1851	222 00	do	July 1, 1851..	....	
3 runs.........	do	180 00	do	do ..	Brown & Band ...	
3 runs.........	do	160 00	do	do ..	....	Notified to quit, Feb. 18, 1867.
3 runs.........	do	160 00	do	do ..	Woodward's Estate	
1 run...........	April 1, 1852	80 00	do	Jan. 1, 1854..	....	
Sufficient water for a dry dock.	Jan. 1, 1851	79 20	do	July 1, 1851..	J. & J. Abbey.....	
3 runs.........	do	270 67	do	do ..	Norris & Neelan..	Notified to quit, Jan. 25, 1866.
2 saws.........	do	147 10	do	do ..	....	One saw remitted, July 16, 1858.
1 run...........	do	66 00	do	do ..	....	
1 run...........	do	66 00	do	do ..	....	
....	April 1, 1862	20 00	do	July 1, 1862..	....	
2 saws.........	Jan. 1, 1851	150 00	July 1, July 1	July 1, 1851..	D. E. McFarland.	
1 run...........	do	86 00	do	do ..	McFarland & Co..	
3 runs.........	do	206 00	do	do ..	....	
....	Jan, 1, 1852	8 00	Jan. 1.........	Jan. 1, 1852..	....	
3 runs.........	Jan. 1, 1851	216 00	July 1, July 1	July 1, 1855..	A. Thompson......	
4 runs.........	Oct. 1, 1864	156 00	do	Jan. 1, 1865..	....	First instalment, $39.
6 runs.........	Jan. 1, 1851	214 00	do	July 1, 1851..	....	Mill not used.
....	Jan. 1, 1854	20 00	do	Jan. 1, 1855..	Moses Betts........	
3 runs.........	Jan. 1, 1851	192 00	do	July 1, 1851..	D. Cooper..........	Assigned to Eb. Seeley, Feb. 9, 1854.
....	Jan. 1, 1867	50 00	Jan. 1, each year, in advance.	....	....	
....	July 1, 1855	25 00	July 1, each year.	July 1, 1856..	....	

APPENDIX No. 25.—WELLAND CANAL.—Statement of Water

Date.	Term of Lease.	LESSEES.	Description of Property Leased.			Area of Property Leased.
			Situation.	Nature of Property.	For what purpose used.	
Mar. 8, 1856	21 years.	A. K. Scholfield...	Port Colborne	Part of No. 28, 1st con., Humberstone.	Wharf	16,000 sq. ft..
Aug. 14, 1854	do	John Gordon......	do	Part of No. 27, 1st con., Humberstone, W. side of W. pier, near old lock-house.	Wood yard...	¼ of an acre..
April 3, 1861	do	L. G. Carter........	do	Lake Erie beach..........	To take off sand for ballasting vessels.	150 ft. frontage.
May 20, 1861	do	Samuel Hopkins..	do	do	do ...	150 do ...
May 20, 1867	do	Welland Railway Co. (R. J. Reckie, Managing Director).	do	Basin	Privilege of erecting a 2nd elevator	50 do ...
Jan. 1, 1851	do	John Graybiel...	Marshville ...	Part of lots Nos. 19 and 20, 3rd con., Wainfleet	Grist and saw mill.	3 r'ds 26 per..
Dec. 27, 1853	do	L. McCallum......	Broad Creek Lock.	Part of Montressor lot...	Saw mill......	¼ of an acre..
Jan. 1, 1851	do	Imlack & Hicks..	do	Parts of lots Nos. 36 and 37 of Sherbrooke Park lots, Port Maitland.	Grist mill.....	½ do ..
Dec. 27, 1853	do	Jacob Turner	Dunnville.....	The Davis mill lot, T'p Moulton.	Grist and saw mill.	1 acre ....
Jan. 1, 1851	do	Samuel Darling...	do	Lot near Grand River, T'p Moulton.	Grist mill and storehouse.	¼ of an acre..
do	do	L. J. Weatherby..	do	do ...	Carding, fulling, spinner, lathes, &c.	¼ do ..
do	do	H. Mittleberger...	do	do ...	Saw mill......	¼ do ..
do	do	Chisholm & Minor	do	do ...	do	½ do ..
do	do	H. Boomer.........	do	Lot near Grand River, near old Welland Canal Co.'s storehouse.	Flour mill ...	25 perches...
do	do	Oldfield & Noxon.	do	Lot No. 21, near T'p Dunn, Co. Haldimand.	....	25,000 sq. ft..
do	do	C. Johnson (now Clarke & Bros).	do	Mill lot No. 4.........	Carding w'ks	31,050 feet...
Dec. 27, 1853	do	Brown & Merritt..	do	Lot near Grand River, near old Welland Canal Co.'s storehouse, Co. Haldimand.	Plaster mill & storehouse.	⅛ of an acre .
July 26, 1860	do	J. C. & R. H. Kirkpatrick.	do	Mill lot, near Sulphur Creek bridge, T'p Dunn	Mill	3 roods ....
Nov. 19, 1866	do	G. T. Railway Co.	do	Surplus water opposite Maple Street.	For engine...	....
Dec. 27, 1853	do	Band & Beatty...	Corner of old waste weir No. 2.	Lot near Sulphur Creek and Grand River.	Grist mill.....	⅛ of an acre..
April 12, 1855	do	Welland Canal Loan Co.	....	All the mill races betwe'n locks Nos. 22 and 11.	....	....

Power and other Property Leased to Various Parties—*Continued.*

Amount of Water Power.	Date from which Lease is reckoned.	Annual Rental	Terms of Payment.		By whom occupied.	REMARKS.
			When due each year.	When first Instalment was payable.		
		$ cts.				
....	July 1, 1856	25 00	Jan. 1, July 1	July 1, 1857..	Buffalo & L. Huron Railway Co.	
....	Jan. 1, 1854	25 00	Jan. 1, July 1	Jan. 1, 1855..	....	
....	Jan. 1, 1861	....	....	....	....	One barley corn, when demanded, for rental.
....	do	....	....	....	....	do
....	Jan. 1, 1867	20 00	Jan. 1, each year, in advance.	....	....	
2 runs..........	Jan. 1, 1851	160 00	Jan. 1, July 1	July 1, 1851..	M. Graybiel........	
3 saws	Oct. 1, 1852	143 00	do	Jan. 1, 1854..	....	
2 runs..........	Jan. 1, 1851	138 00	do	July 1, 1851..	....	Mill burnt.
2 runs, 2 saws	Jan. 1, 1853	270 00	do	Jan. 1, 1854..	Richd. Chambers.	Until Lake Erie level be adopted only two-thirds of the rent is payable yearly.
2 saws..........	Jan. 1, 1851	130 00	do	July 1, 1851..	....	Mill burnt.
Sufficient water for 3 mills.	do	80 00	do	do ..	A. R. Carpenter...	
1 saw & part of water fr'm mill pond.	do	100 00	do	do ..	Gordon & Co......	
5 saws & part of water in mill pond.	do	208 00	do	do ..	R. A. Clarke......	
3 runs..........	do	180 00	do	do ..	A. S. St. John.....	do
3 saws..........	Jan. 1, 1851	176 00	do	do ..	....	do
1 saw	do	100 00	do	do ..	Scott & Co.........	
1 run............	Jan. 1, 1853	113 00	do	Jan. 1, 1854..	....	
3 runs..........	Jan. 1, 1857	180 00	do	Jan. 1, 1857..	....	
2 feet pipe ...	July 1, 1866	20 00	do	Jan. 1, 1867..	....	
2 runs..........	Oct. 1, 1852	149 20	do	Jan. 1, 1854..	Beatty's Estate...	
All the surplus water.	Jan. 1, 1855	720 00	do	July 1, 1855..	....	

APPENDIX No. 25.—RIDEAU CANAL AND RIVER.—Statement

Date.	Term of Lease.	LESSEES.	Property Leased.			Superficies of Lot leased.
			Situation.	Description.	For what purpose used.	
Jan. 3, 1850	20 years.	Wm. Anglin.....	Brewer's Upper Mills.	Water lot..............	Mills	....
Feb. 15, 1853	21 do	Joshua Bates...	Old Sly's Station.	Two water lots, A & B, being part of No. 30, con. E, Wolford	Grist mill........	....
Mar. 31, 1853	Pleasure of Gov't	Joshua Bates...	do	Land adjoining above.	....	42 acres ....,
Mar. 29, 1854	21 years.	Thos. McKay ..	Green Island...	In Rideau River.....	Mills	All the Island..
Nov. 18, 1861	do	James Shaw, jr.	Edmund's (Mill Lock).	Part of No. 29, T'p Montagu.	do	2 arp., 1 rood, 39 perches.
Mar. 21, 1862	do	James C. Foster	Brewer's Lower Mills.	Part of No. 21, T'p Storrington, 7th con.	Grist mill........	2 arp., 2 roods, 4 perches.
May 21, 1862	do	Benjamin Tett..	Isthmus Lock Station.	Part of Nos. 1 and 2, T'p N. Crosby, 4th con.	....	Width of lots 1 & 2, being 200 ft. deep from water's edge.
Nov. 3, 1863	Pleasure of Gov't	E. H. Whitmarsh.	Merrickville.....	In Town of Merrickville.	Garden & ornamental gro'nds	6 by 2 chains...
Jan. 5, 1864	do	Rufus Andrews	Nicholson's Lock.	Lot No. 2, con. A, Wolford.	Permission to build a draw bridge.	....
Sep. 16, 1864	21 years.	Edward Smith..	Kingston Mills.	Part of No. 38, 4th con., Kingston.	Store, grist and flour mills.	.. ..
May 4, 1865	do	M.K. Dickinson (now Clark Fitts & Sam. N. Davis, his assignees).	Long Island ...	Lot No. 9, Long Island.	Mills	On his own property.
....	....	Robt. Skead.....	Hogsback........	Lots Nos. 1, 2, 3 and 4.	No improvements.	....
....	....	Late J.S. French	Burritt's Rapids	....	Flour, saw and shingle mills.	....
....	....	Alex. Keir......	do	....	....	....
....	....	H. Easton........	Merrickville ...	....	Flour mill... ..	....
....	....	A. S. Mirrick...	do ...	....	Flour and saw mills.	....
....	....	A. R. Ward.....	Smith's Falls...	....	Two flour, 2 saw and 1 shingle mills.	....
....	....	Wm. Simpson ..	do ...	....	One saw mill...	....
....	....	Geo. Morton.....	WhiteFish Dam	....	Flour and saw mills.	....

of Water Power and other Property Leased to Various Parties.

Amount of Water Power leased.	Date from which Lease is reckoned, or of Auction Sale.	Annual Rental.	Terms of Payment.			REMARKS.
			Amount of each instalm't	When payable each year.	When first instalment becomes payable.	
		$ cts.	$ cts.			
All the water not required for navigation.	May 1, 1850	1st 10 yrs $120, 2d 10 years $160.	60 00 80 00	May 1, Nov. 1	Nov. 1, 1850	
....	Nov. 1, 1851	120 00	60 00	do	May 1, 1852	
....	do	....	....	....	....	
....	Mar. 29, 1854	80 00	80 00	Jan. 1	Jan. 1, 1855	
4 runs, or 40 horse power.	Apr. 13, 1859	101 00	50 50	Jan. 1, July 1	July 1, 1862	No improvements.
4 runs............	May 15, 1861	105 00	52 50	do	Jan. 1, 1864	$103 paid on day of auction sale, to count for the year ending July 1, 1863. The 2nd instalment, $54.50, shall be due Jan. 1, 1864.
....	May 1, 1862	3 00	3 00	May 1.........	May 1, 1863	
....	Nov. 1, 1863	20 00	20 00	Nov. 1.........	Nov. 1, 1864	Rent payable in advance.
....	Jan. 5, 1864	1 00	1 00	Jan. 1.........	Jan. 1, 1864	do
All the water not required for navigation.	July 1, 1864	360 00	180 00	Jan. 1, July 1	Jan. 1, 1866	The first year, ending Jun 1865, to be free of rent.
All the water...	Jan. 1, 1861	50 00	25 00	do	July 1, 1861	
....	....	....	....	.. ..	....	
....	....	Pays no	rent	....	....	
....	....	do	do	....	....	
....	....	do	do	....	....	
....	....	do	do	....	....	
....	....	do	do	....	....	
....	....	do	do	....	....	
....	....	do	do	....	....	

APPENDIX No. 25.—OTTAWA RIVER.—STATEMENT

Date.	Term of Lease.	LESSEES.	PROPERTY LEASED.			
			Island.	Lot.	Side of Street.	Area of Lots. Square Links.
May 14, 1859	10 years, ren'w'ble	Perley, Pattee & Brown...	Chaudière ...	A	N. of Chaudière St..	2 r'ds 34 per..
Sept. 27, 1861	21 years.	do ...	do ...	B	do ...	18,400
do	do	do ...	do ...	C	do ...	26,500
do	do	Thompson & Perkins......	do ...	D	do ...	27,200
do	do	Lyman Perkins................	do ...	E	do ...	25,500
do	do	do	do ...	F	do ...	25,100
do	do	do	do ...	G	do ...	25,500
do	do	John & Thos. McKay.... .	do ...	H	S. of Head St.........	24,966
do	do	do	do ...	I	do	22,700
do	do	do	do ...	J	do	22,300
do	do	John & James Petrie......	do ...	K..... ...	do	21,300
do	do	P. H. & L. R. Church......	do ...	L	do	19,500
May 14, 1859	10 years, ren'w'ble	Perley, Pattee & Brown...	do ...	M, N, O, P..	S. of Head St. (East) or Middle St......	2 roods, or ½ an acre.....
May 27, 1861	21 years.	N. S. Blasdell................	Victoria Isl'd	Q	N. of Middle St......	21,000
do	do	J. M. Currier..................	do ...	R	do	19,875
do	do	do	do ...	S	do	23,910
do	do	Young, Soper & Winn	do ...	T	do	18,300
do	do	Harris, Bronson & Coleman	do ...	U	do	20,700
do	do	do ..	do ...	V.........	do	20,700
do	do	do ..	do ...	W.........	do	24,100
do	do	do ..	do ...	X	do	26,300
do	do	do ..	do ...	Y	do	28,300
do	do	do ..	do ...	Z	do	29,200

of Water Power Leased to Various Parties.

Description of Mill on Lot.	Amount of Power leased. Run of Mill Stones.	Date from which Lease is reckoned, or Date of Auction Sale.	Annual Rental.	TERMS OF PAYMENT.			REMARKS.
				Amount of each instalment.	When payable.	When first instalment was payable.	
Service ground	....	....	$	$	....	....	No rent chargeable, this lot having been sold as service ground.
Saw mills..........	10 runs..	June 3, 1856..	200	100	Dec. 3, June 3..	Dec. 3, 1857..	No rent for first year.
	do ...	do ..	200	100	do ..	do ..	
do	do ...	do ..	200	100	do ..	Dec. 3, 1858..	No rent for first and second years.
....	do ...	do ..	200	100	do ..	do ..	
....	do ...	do ..	200	100	do ..	do ..	
Grist & oat mills..	do ...	Oct. 1, 1852..	200	100	April 1, Oct. 1..	April 1, 1854.	No rent for first year.
	do ...	do ..	200	100	do ..	do ..	
	do ...	do ..	200	100	do ..	do .	
Fanning establishment	do ...	May 1, 1855..	200	100	Nov. 1, May 1..	Nov. 1, 1856.	
....	do ...	do ..	200	100	do ..	do ..	
....	do ...	From time water is to be used......	200	100	Jan. 1, July 1..	....	
Victoria Foundry & Machine Shop, & wood planing establishment........	do ...	Oct. 1, 1852..	200	100	April 1, Oct. 1..	April 1, 1854.	
....	do ...	do ..	200	100	do ..	do ..	
....	do ...	do ..	200	100	do ..	do ..	
Saw mill.....	do ...	do ..	200	100	do ..	do ..	
Saw mills..........	do ...	do ..	200	100	do ..	do ..	
	do ...	do ..	200	100	do ..	do ..	
	do ...	do ..	200	100	do ..	do ..	
	do ...	do ..	200	100	do ..	do ..	
	do ...	do ..	200	100	do ..	do ..	
	do ...	do ..	200	100	do ..	do ..	

APPENDIX No. 25.—OTTAWA RIVER.—STATEMENT

Date.	Term of Lease.	LESSEES.	PROPERTY LEASED.	Superficies of Lot leased.
Aug. 31, 1835	10 years.	David Moore..	Rocher-fendu Island, in River Ottawa.......	The whole Island.
Oct. 11, 1853	21 years.	Geo. Pemberton	North part of the Island, immediately north of the old Indian Portage Island, at the Chats, head of the Chaudière Lake.	Not mentioned ...
Oct. 31, 1853	do	John Egan....	Part of Chats slide, lot on Victoria Island; also, two small islands between Morris' Island and Victoria Island, at S.W. of the latter.	5 acres.................
Nov. 10, 1853	do	Peter Aylen............	South part of the Island immediately north of the old Indian Portage Island, at the Chats, head of Chaudière.	Not mentioned ...
Nov. 11, 1853	do	Robt. Conroy..........	The old Indian Portage Island, at the Chats, head of Chaudière Lake.	7 acres..............
Nov. 16, 1854	do	Wm. Hamilton..	Three small islands, opposite No. 33, con. A, Township Nepean, County of Carleton.	11 acres 3 roods, 14 perches.
July 23, 1857	do	John Rankin..........	East part of Hawley's Island, between Allumette Island and Westmeath T'p, C.W.	140 acres 2 roods, 22 perches.
Aug. 10, 1848	do	Lawrence Prout	Lot on Calumet Island, Ottawa River.........	1 acre ....
———1855	Pleasure of Gov't	L. M. Coutlee.........	An Island at the Rapide du Chêne..............	950 × 150 links...
Jan. 7, 1863	21 years.	Duncan Carmichael..	Water lot near waste weir of Calumet slides, E. of 1st basin, Ottawa River (being an island).	1 acre, 4,440 sq. ft
Feb. 14, 1865	Pleasure of Gov't	Archibald Keys........	A roadway across con. A, Aberford, Pontiac.	....
July 27, 1865	do	Widow J. Morrison..	Part of lot No. 9 (or No. 4) in 1st con., Chatham, Carillon Canal.	....

of Water Power Leased to Various Parties.—*Continued.*

Description of Mill.	Amount of Water Power Leased	Date from which Lease is reckoned, or of Auction Sale.	Annual Rental.	Terms of Payment.			REMARKS.
				Amount of each Instalment.	When Payable.	When first Instalment was due.	
			$ cts.	$ cts.			
....	....	Aug. 31, 1835	4 00	4 00	June 24..........	June 24, 1836	
Saw mill...	With power of using as much water as they will require for the mills which they may erect on these lots, &c.	Jan. 1, 1854	80 00	80 00	Jan. 1..........	Jan. 1, 1855	
do ...		do	80 00	80 00	do	do	
do ...		do	80 00	80 00	do	do	
do ...		do	80 00	80 00	do	do	
....		Nov. 16, 1854	24 00	24 00	do	Jan. 1, 1856	
....		July 1, 1858	20 00	20 00	July 1..........	July 1, 1858	
Saw mill......	One or more gang of saws.	Dec. 16, 1846	$40 p'r gang.	20 00	June 1, Dec. 1	June 1, 1847	
....	....	Apr. 12, 1854	8 00	8 00	Jan. 1..........	Jan. 1, 1855	
Circular saw..	All the water.........	Nov. 14, 1862	40 00	20 00	Jan'y 1, July 1	July 1, 1863	
Roadway	....	Feb. 14, 1865	1 00	1 00	Feb. 1..........	Feb. 14, 1865	
Farm..........	....	Nov. 1, 1865	16 00	16 00	Nov. 2 (in advance.	Nov. 2, 1865	

APPENDIX No. 25.—CHAMBLY CANAL.—STATEMENT of Water

Date of Lease.	Term of Lease.	LESSEES.	LOT.	Situation of Lots.	For what purpose used.	Area of Lots.
Mar. 11, 1851.	10 years.	Jason C. Pierce & Son (now Chs. V. Pierce),	A and 1, 2, 3..	At St. John's and on River Richelieu.	Steam Saw Mill...	226 feet English measure frontage.
do 30 1859.	Pleasure of Gov't.	Wm. Coate.........	Small Plot...	St. John's..........	Adjoining his tannery.	....

ST. OURS LOCK

June 25, 1845	Pleasure of Gov't.	Widow of late Hon. R. de St. Ours.	Surplus water.	Ile Avare, in Richelieu River.	Grist Mill...	....

TRENT

Nov. 11, 1853	21 years.	James Cummings.	No. 9, University.	8th Con., Sydney, Chisholm's Rapids.	....	Between Canal and River.
Feb. 22, 1855	Pleasure of Gov't.	do ..	do ..	do ..	Lock-house........	1¾ acres..........
———, 1867.	21 years.	M. B. Roblin......	....	Near Village of Frankford, at Nine Mile Rapids, Sydney.	Mills and Manufactories.	Lot owned by him.
Nov. 11, do ..	Pleasure of Gov't.	Needler & Sadler.	No. 21.........	6th Con. of Ops...	Piling Lumber.....	½ acre ....

On the 8th December, 1843, (No. 1968) William Purdy and others conveyed to Government, part of rency, $1,600, reserving to themselves the use of the water for their mills above the Town of Lindsay, free

Power and of Buildings and other Lots Leased to Various Parties.

Amount of Water Power Leased.	Date from which Lease is reckoned.	Annual Rental.	TERMS OF PAYMENT.			REMARKS.
			Amount of each instalment.	When first instalment became payable.	When payable each year.	
....	Jan. 1, 1851..	$ 113	$ 56 50	July 1, 1851..	Jan. 1, July 1..	
....	....	20	....	....	....	

AND DAM.

Not less than 2 runs.	....	Free...	....	....	....	

RIVER.

All the surplus water or span.	Jan. 1, 1854..	20	20	Jan. 1, 1855..	Jan. 1........	
....	Feb. 22, 1855.	20	20	do 1856..	do	
All the surplus water.	Jan. 1, 1867.	1	1	do 1868..	do	
....	....	36	18	At delivery of lease.	Jan. 1, July 1..	This ½ acre of land is on the North side of the Slide, near the Railway Station at Lindsay. (See remark below.)

lots Nos. 20 and 21, in the 6th Concession of Ops, in the County of Peterborough, for a sum of £400 Cur-
from rent; these mills were to be removed and remodelled.

APPENDIX

ROADS AND

STATEMENT shewing the Public Roads, Bridges and Harbors, Sold to Incorporated

Where Proclamation of the Order in Council granting the Works is entered—in *Canada Gazette.*		WORKS SOLD.	To whom Sold.	When Sold.	Date of Possession.	Amount of Purchase Money.
Page.	Date of Proclamation.					
10,593	April 11, 1851.	The Brantford Bridge, and the Road from Hamilton to the Western Boundary Line of the County of Wentworth, being composed of the Hamilton and Brantford Road, and part of the London and Brantford Road (except what lies in the Town of Brantford.)	Brantford Road Co.	Oct. 15, 1850	Oct. 15, 1850	£ s. d. 27,100 0 0
37, of 1853..	July 3, 1852	The Port Dover Harbor	Port Dover Harbor Co.	do	do	7,600 0 0
13,721	Sept. 2, 1852	The Rondeau Harbor..........	Rondeau Harbor Co.	July 1, 1851	... .	2,000 0 0
———	....	The Port Stanley Harbor (tolls, &c.)	London and Port Stanley Railway Co.	Sept. 1, 1859	Sept. 1, 1859	None..........
2,072	July 17, 1860	The Road through Co. Oxford, composed of all that part of London & Brantford Road, lying in said Co., except what is in Town of W'dstock	The Woodstock and Ingersoll Gravel Road Co.	do	....	50 0 0
———	....	The Goderich Harbor (Lake Huron) and Wharfage Dues.	Buffalo & Lake Huron Railway Co.	May 30, 1862	.. ..	One pepper corn, if demanded.
866	Mar. 21, 1864	The Port Whitby Harbor (formerly known as the Windsor Harbor).	Port Whitby Harbor Co.	Mar. 21, 1864	....	$ cts. 35,150 00
———	....	The Hamilton and Port Dover Road, and the Caledonia Bridge.	Z. B. Choate & Samuel Kern.	Jan. 30, 1865	Mar. 22, 1865	17,000 00
865	Mar. 21, 1864	The Windsor & Scugog Road, from Town of Whitby thro' T'ps of W'by & Reach, to L. S'gog, with bridg's, tolls, &c	Whitby and Scugog Gravel Road Co.	Mar. 21, 1864	....	£ s. d. 2,500 0 0
———	....	The Jacques Cartier Bridge, County of Portneuf.	A. S. Matte *et al.*	Feb. 3, 1853	....	Annual Rent. $ cts. 0 25
1568	May 25, 1863	The St. Maurice Bridge........	Ed. Normand...	Oct. 31, 1862	....	1 00
———	....	The Bridge at St. Timothée, over tail race, from Beauharnois Canal waste weir.	Fabrique St. Timothée.	Sep. 13, 1848	....	....

No. 26.

BRIDGES.

Companies, &c., under Acts 12 Victoria, Cap. 5, and 13 and 14 Victoria, Cap. 14.

TERMS OF PAYMENT.	Security given.	REMARKS.
1st. The purchase money on each sale is to be paid to Her Majesty's Receiver General, for the time being, in annual instalments of 5 per cent each, commencing on 15th October, 1852, with interest at 5 per cent per annum on the whole amount of purchase money, or so much as shall remain due, payable half-yearly, on 15th April and Oct. in each year, from 15th Oct., 1850.—2nd. All payments made to be forfeited in case of non-performance of the conditions of the grant or transfer.—3rd. Government to resume the works after ten years, on paying to grantees the then cash value thereof, less purchase money or interest remaining unpaid, &c. *Note.*—The amount of security required is ten per cent of the purchase money on each sale.	Surrender by John Lovejoy and wife, of lands in the Township of Brantford.	
	Surrender by John White and wife, of lands in Trafalgar.	Resumed by an Order in Council of 18th September, 1863.
Ten per cent. was paid on 1st July, 1851; £100 18s. on 1st July, 1852, leaving a balance of £1,700, payable as follows: £100 on 1st July, 1853, and £100 on 1st July each year following, until full payment, with interest at 5 per cent, from 1st July, 1852, payable on 1st July each year.	....	An O. in C. of April 28, 1856, authorizes the transfer of this harbor to the Rondeau & St. Clair Plank Road Co. when the same is resumed by Gov't on certain conditions mentioned in Commissioners report to Council.
This harbor was granted to them upon trust to lay out and expend (in improving, repairing and constructing the harbor and inner basin) the following moneys, as they shall receive the same: 1st. The tolls accrued for year 1858, and 2nd. The sum of $2,899.89, appropriated by Gov't for that purpose.—3rd. The Comp'y, to collect the tolls and apply the same in improving the harbor.	Bond for $4,000 by Edward Adams, Elijah Leonard, Colin Munro, Samuel Price.	The Company to make a yearly Return to Provincial Secretary, on 1st January each year (See Deed No. 1,493).
On condition of paying, on 1st September, 1860, this sum of £50, with interest on same, from 1st September, 1859, at the rate of 6 per cent. per annum.	....	The remaining part of the London and Brantford Road, being that part running from the Eastern Boundary Line of the Co. of Middlesex to the Town of London, sold to the Mun. Coun. of the Co. of Middlesex.
Leased to them for 99 years, from 30th May, 1852, as appears by lease, No. 2,395*a*, of 2nd June, '62, on condition that the Co. shall, within five years from this date, provide sufficient accommodation in the inner harbor for the largest vessels, with a safe channel leading thereto.		
$8,787.50 paid on 21st March, 1864; residue payable in five annual instalments of $5,272.50 each, with interest at 6 per cent, on 18th March yearly. First instalment payable 18th March, 1865.		
$200 payable at date of sale; $1,500 paid 15 days after that date; balance payable as follows: $1,700 on 1st Jan. each year, until the whole is paid, with interest at 7 per cent on 1st July and 1st Jan. yearly. First instalment to be made on 1st July, 1865 (as appears by Crown grant No. 2,758 of 30th Jan., 1865).	Bond for $8,500 by B, Leaming and Jacob T. Kern.	
$2,500 payable on 21st March, 1864; the balance, or $7,500, in five annual instalments of $1,500, on the 15th March each year, with interest at 6 per cent. First instalment due 15th March, 1865.	....	
On condition of keeping same in due repair, but not of reconstructing same, if destroyed by accident or otherwise.	....	Leased to them for 15 years, from 3rd February, 1853.
do do do	....	To be abandoned by Government on 1st June, 1853.
In consideration of cert'n damages claimed by the Fabrique, Gov't paid them £80, and the Fabrique bound themselves to keep & maintain this bridge in ordinary repairs.	....	

APPENDIX No. 26.—ROADS AND BRIDGES.—STATEMENT shewing the
Canada, under the Act

Where Proclamation of the Order in Council Granting the Works is entered—in *Canada Gazette*.		WORKS SOLD.	To whom Sold.	When Sold. Possession given same day.
Page.	Date of Proclamation			
....	....	The Kingston and Napanee Road........	To Municipal Council of the United Counties of Frontenac, Lennox and Addington.	Oct. 15, 1850.
....	....	The Port Hope and Rice Lake Road......	To the Municipal Council of the Town of Cobourg.	do
10,918	May 13, 1851.	The Delaware Bridge, the Westminster Bridge, the London and Port Stanley Road, and the Road from London to the eastern boundary line of the Co. of Middlesex, being part of the London and Brantford Road.	To the Municipal Council of the County of Middlesex.	Sept. 1, 1850.
....	....	The West Gwillimbury Road..............	To the Municipal Council of the Township of West Gwillimbury.	May 7, 1850..
....	....	The Queenston and Grimsby Road..	To the Municipal Council of the United Counties of Lincoln, Haldimand and Welland.	Dec. 1, 1850..
....	....	The Chatham Bridge.......	To the Municipal Council of the Town of Chatham.	April 19, 1851
....	....	The Trent Bridge.............................	To the Municipal Council of the Township of Murray.	1851..
....	. ...	The Cobourg Harbor.	The Town of Cobourg tendered for.	May 27, 1850
....	....	The Chippewa Cut and Bridge, in the Township of Willoughby, County of Welland.	To Municipality of Village of Chippewa.	Mar. 30, 1856
....	....	The Dundas and Waterloo Road.........	Jointly to Corporations of Galt and Dundas.	Leased for 10 years from Jan. 1, 1863
1,235	April 4, 1865.	The Yonge street or North Toronto Road to Holland Landing, the East York Road, including the Don Bridge and Road over same, the Dundas street or West York Road, and the Lake Shore Road, with bridges, tolls, &c.	Municipal Council of the United Counties of York and Peel.	April 4, 1865.

Public Roads, Bridges, &c., Sold or to be Sold to Municipal Bodies in Upper 12 Victoria, Chapter 12.

Amount of purchase money.	Terms of Payment.	REMARKS.
£ s. d.		
15,400 0 0	Five per cent. of purchase money payable annually, commencing on 15th October, 1852, with interest at 5 per cent. per annum, payable semi-annually, from date of sale.	In 1852, this amount was reduced, by an Order in Council, to £13,300, payable in 20 years.
4,600 0 0	do do	
4,500 0 0	The purchase money payable in 10 years, from date of sale, with interest at 5 per cent. per annum, payable semi-annually.	
550 0 0	Purchase money payable in 20 years, with interest, half-yearly, at 5 per cent. per annum.	
1,000 0 0	do do	By 26 Vic., cap. 13 (1863), the Town of Niagara and the Townships of Gainsborough & Caistor, in the Co. of Lincoln are exempted from all taxation arising out of the assumption of this road by the Corporation of the County of Lincoln.
500 0 0	The purchase money payable in 20 years, in instalments of 5 per cent. per annum, with interest at 6 per cent., payable semi-annually.	
750 0 0	The purchase money payable in 10 years, by instalments of 10 per cent. per annum, with interest at 5 per cent.	This sale was not completed, but by an Order in Council of 18th March, 1853, this bridge was transferred to the Municipality of the Village of Trenton. No price mentioned in this Order in Council.
4,000 0 0		
5 0	Entitled to receive all tolls on vessels, &c., passing through the Cut.	The Government having power to resume for public purposes on paying them as compensation, their actual expenditure to be awarded by Arbitrators. (See Deed No. 2,317) of 30th March, 1856.
Annual Rent. $1,250 00	Payable in half-yearly instalments, on 1st January and July. First payment due on 1st July, 1863.	Bond for $1,000 by J. M. Thornton *et al.*
$72,500 00	Secured by debentures payable in 20 years, at furthest, from April 4, 1865, with interest at 6 per cent. per annum on amount unpaid. The debentures to be delivered to Receiver General within 6 months from this date, with coupons attached for payment of interest half-yearly.	

APPENDIX No. 26.—ROADS AND BRIDGES in Lower Canada, declared by Proclamation, in the *Canada Gazette*, to be no longer under the control of the Commissioners of the Public Works, and to be under the control of the Municipal Authorities of the Locality in which these Roads and Bridges are situated, and of the Road Officers thereof.

Where Proclamation of the Order in Council to abandon the Works, is entered in the *Canada Gazette.*		WORKS ABANDONED.	Length of Roads.	REMARKS.
Page and date of Proclamation.				
59 (of 1857)	31st Dec., 1856...	The Gosford Road, from Craig's Road to the line between the townships of South Ham and Weedon......	60 miles.	
do	do ...	The Kennebec Road, from River St. Lawrence to Province Line...........	90½ do	
do	do ...	The Chemin des Caps, from St. Joachim to Baie St. Paul.................	34 do	
do	do ...	The Malbaie and Grande Baie Road, from Lake Nairne to Village of Bagot	63 do	
do	do ...	The Temiscouata Portage Road, from Rivière du Loup to the Grand Falls.	54 do	
do	do ...	The Kempt Road, from Métis to Officers' Brook, on River Ristigouche......	95 do	
do	do ...	The Gaspé Roads, from Officers' Brook, in County of Bonaventure, to Little Cape Gaspé, in County of Gaspé......	106 do 67 do 12 do	
do	do ...	The Métis and Matane Road, from River Métis to River Matane	31 do	
do	do ...	The Cascades and Isle Perrot Road, from its intersection with Côteau du Lac Road, to the ferry over Ottawa River, below Ste. Anne Lock.......	7½ do	
		Also: *The Main Eastern Townships Road and its branches, to wit:—*		
do	do ..	1. The High Road; from Chambly to St. Césaire, and from St. Césaire to Granby.		
do	do ...	2. The Granby to the outlet and Province Line Roads.............	54 do	
do	do ...	3. The Granby and Sherbrooke Road, from Granby to Sherbrooke	45¾ do	
do	do ...	4. The outlet and Sherbrooke Road, from Waterville, at the outlet of Lake Memphremagog, to Sherbrooke	14 do	
do	do ...	5. Spier's Corner to Stanstead..........	59 do	
do	do ...	6. Sutton Mountain Road, from Ferres' Mill to:	4½ do	
do	do ...	7. Potton Mountain Road, from Potton Corner, or Village of Mansonville, to Province Line, near Lake Memphremagog..	6 do	

do	do ...	Also: The Arthabaska Road, from its intersection with the road between Danville and Kingsey, to its intersection with Gosford Road, with the Branch Road known as the Gentilly Branch Road.		
do	do ...	Also: The Rimouski wooden bridge, built in 1848, by the Commissioners of Public Works.		
		Also: All the bridges on the said roads.		
9,225.........	16th Aug., 1850...	The Cascades and Côteau Road	....	Abandoned to Municipal County of Vaudreuil.
11,328.........	1st Aug., 1851...	The Chambly and Granby Road, from Yule's bridge, St. Mathias, to Village of Granby, passing through Ste. Marie de Monnoir, St. Césaire and St. Paul d'Abbottsford, with bridges, tolls, &c................	30 miles.	Granted for 5s. to the Chambly and Granby plank and macadamized Road Company.
2,313.........	3rd Dec., 1856...	The St. Athanase and Stanbridge Road, from St. Athanase, in County of Iberville, to Stanbridge, in County of Missisquoi....................	....	Abandoned to Municipal Councils of Counties of Iberville and Missisquoi.
897.........	11th May, 1858...	The Chambly and Longueuil Turnpike Road, from Longueuil Ferry to La Petite Rivière, in Parish of Chambly, and from thence to Canton of Chambly, within 100 yards of the Fort..........................	... .	Granted for 5s. to Municipality of Village of Longueuil, Basin of Chambly and Canton of Chambly.
2,366.........	25th Aug., 1864..	The Hereford Road, being part of the main Eastern Townships Roads.		

APPENDIX No. 26.—ROADS AND BRIDGES in Upper Canada, declared by Proclamation, in the *Canada Gazette*, to be no longer under the control of the Commissioners of Public Works, under the Act 13 and 14 Victoria.

Where Proclamation of the Order in Council to abandon the Works is entered—in *Canada Gazette*.		WORKS ABANDONED.	Counties in which the Works are situate.
Page.	Date of Proclamation.		
Page 862	17th June, 1853	Chatham and Amherstburg Road	That part situate in Kent.
do	do	do	do Essex.
do	do	Rondeau Road	County of Kent.
do	do	Maidstone Cross and Sandwich Road	do Essex.
do	do	Amherstburg and Sandwich Road	do do
do	do	Tecumseth Road	do do
do	do	do	do Kent.
do	do	Dundas and Owen Sound Road	do Wentworth.
do	do	do	do Wellington and Grey.
do	do	Bradford and Bond-Head Road	do Simcoe.
do	do	do and Barrie Road	do do
do	do	Barrie and Penetanguishine Road	do do
do	do	do and Nottawasaga Road	do do
do	do	Coldwater Portage Road	do do
do	do	The continuation of the Windsor Harbor and Lake Scugog Road to the Narrows of Lake Simcoe	do Ontario.
do	do	Peterborough and Lindsay Road	do Peterborough and Victoria.
do	do	do and Norwood Road	do Peterborough.
do	do	Trent Slide and Drawbridge Road	do Northumberland (of Northumberland and Durham)
do	do	Kingston and Ottawa Road	do Addington (Frontenac, Lennox and).
do	do	Prescott and Ottawa Road	do Leeds and Grenville.
do	do	do	do Carleton.

do	do	Cornwall and L'Orignal Road	do	Stormont, Dundas and Glengarry.
do	do	do	do	Russell (of Prescott and Russell).
do	do	Military Road, Lancaster and L'Orignal	do	Glengarry (Stormont, Dundas and).
do	do	Bytown and L'Orignal Road	do	Carleton.
do	do	do	do	Prescott and Russell.
do	do	Bytown and Pembroke Road	do	Carleton.
do	do	do	do	Renfrew.
			County.	River.
do	do	Shannonville Bridge	Hastings.	Salmon River.
do	do	Gananoqui do	Leeds.	Gananoqui River.
do	do	Narrows do	Simcoe.	Lake Simcoe.
do	do	Peterborough do	Peterborough.	Otonabee.
do	do	Rideau do	Carleton.	Rideau.
do	do	Winchester do	Dundas.	Petite Nation.

APPENDIX No. 26.—ROADS AND BRIDGES in UPPER CANADA declared by Proclamation, in the *Canada Gazette*, to be no longer under the control of the Commissioners of Public Works, under the Act 13 and 14 Victoria.

Where Proclamation of the Order in Council abandoning the Works, is entered—in *Canada Gazette.*		WORKS ABANDONED.	TO WHOM.	WHEN.	REMARKS.
Page and date of Proclamation.					
10,591	17th April 1851	The London and Chatham Road, from Rymal's Corners, in the Township of Westminster, County of Middlesex, to the Town of Chatham, and all the bridges thereon, except the Delaware Bridge; also, the London and Sarnia Road, from the western limit of the Province line Road, in Middlesex, to the Village of Port Sarnia..	Partly to Municipality of the County of Middlesex, and partly to that of Kent and Lambton....................	 1850	
10,591	17th April 1851	That portion of the Chatham Road, from the junction, in Westminster, to the western town line of Mosa; and that portion of the Port Sarnia Road, within the County of Middlesex................	To Municipality of the County of Middlesex	 1850	
....	....	The Belleville Bridge	To Municipality of Belleville..	 1850	
3,712	10th Dec., 1863	The Branch Road, between Lots Nos. 28 and 11, in Township of Lancaster, County of Glengarry	To Municipal County of Glengarry (of the united Counties Stormont, Dundas and Glengarry)	10 Dec. 1863	

APPENDIX No. 26.—BRIDGES declared by Proclamation in the *Canada Gazette* to be no longer under the control of the Commissioners of Public Works.

Where Proclamation of the Order in Council to abandon the Bridges, is entered in the *Canada Gazette*.			Name of Bridge.	Situation.		REMARKS.
Page.	Date of Proclamation.	Date of Order in Council.		In Canada East or West.	River.	
		19th March, 1850.. 24th Feb., 1852.. 21 & 24 Nov., 1852	Batiscan	C. E.	Batiscan	Jos. Fugère, keeps it in repair and collects tolls thereon.
		12th Sept., 1851.. 20th Sept., 1856..	Bayonne	do	Bayonne	Abandoned to Joint Municipalities of Parish and Village of Berthier (en haut).
		12th Sept., 1851.. 14th Sept., 1852..	Bécancour	do	Bécancour	do Municipalities, Nicolet.
		20th Sept., 1856	Berthier	do		do do Berthier.
10,573	11th April, 1851	13th Aug., 1850	Brantford	C. W.		See at Hamilton and Brantford Road.
			Caledonia	do	Grand River	do do Port Dover Road.
833	30th Mar., 1859	12th Sept., 1851.. 14th Sept., 1852..	Châteauguay	C. E.	Châteauguay	On road from Beauharnois to Caughnawaga.
		19th March, 1850	Chatham	C. W.	Thames	In County of Kent.
		12th Sept., 1851.. 14th Sept., 1852..	Chaudière	C. E.	Chaudière	
		19th March, 1850.. 12th Sept., 1851..	Duchesne	do	Duchesne	
		do do	Etchemin	do	Etchemin	Now Trustees of Turnpike Road of the locality.
		12th Sept., 1851.. 14th Sept., 1852..	Godfroi	do	Godfroi	Municipality of Nicolet.
		12th Sept., 1851	Memphremagog	do	Memphremagog	
2,812	21st Nov., 1857	21st Nov., 1857	Melbourne	do	St. Francis	Municipality of the Townships of Melbourne and Cleveland.
830	24th March, 1859.	15th March, 1859	Narrow's	C. W.	Lake Simcoe	Near Village of Atherly, on road from County of Ontario to County of Simcoe.
		12th Sept., 1851.. 14th Sept., 1852..	Nicolet	C. E.	Nicolet	Municipality of Nicolet.
888	15th April, 1859..	1859	Pont-Noir	do	Jacques-Cartier	Parish of Cap Santé, County of Portneuf.
59 of (1867)	31st Dec., 1856	12th Dec., 1856	Rimouski	do	Rimouski	See at Roads and Bridges Lower Canada.
			Rock Island	do		Abandoned.
1,931	3rd Aug., 1857..	12th Sept., 1851.. 24th Feb., 1852..	Ste. Anne de la Pérade.	do	Ste. Anne	F. X. Laflèche—Mr. Baribeau and family pass *free* of tolls over this Bridge.—See page 10,727 of 1861.
		19th March, 1850	Trent	C. W.	Trent	

APPENDIX No. 27.

LIST OF PUBLIC BUILDINGS, &c., BELONGING TO GOVERNMENT.

Where situated.	For what purpose acquired or used.	Description and situation of Property.	Vendors.	Date of Sale.	Price of Sale. £ s. d.	REMARKS.
Quebec	Nautical School	Lot and building No. 63, St. Lewis St., opposite Esplanade.	W. S. Sewell *et al.*	Nov. 11, 1854	5,000 0 0	Lately occupied by Postmaster General's Department.
do	Post Office	do No. 3, Buade St., Upper Town.	Geo. Alford	Sept. 6, 1853	4,000 0 0	
do	Old Château St. Louis.	Des Carrières street	......	......	......	Lately Crown Lands Department.
do	New Jail	On Bonner Property, Grande Allée, near Quebec.	J. Bonner (through J. F. Bradshaw).	Feb. 8, 1860	......	See Page 325.
do	Court House	On St. Lewis and des Forts Sts., Upper Town.	......	......	......	The Act 55, Geo. III, cap. 9, of 1815, appropriates a sum of money to improve it. The title deeds are probably with the Prothonotary, Quebec.
do	New Custom House.	On Pointe à Carcy, Dalhousie St., Lower Town.	John Jones	Nov. 24, 1855	5,000 0 0	
do	Marine Hospital	Hospital and Dorchester Sts., St. Roch's.	Trustees of Morrin's College.	......	......	Appropriation of £11,541 8s. 6d. to erect it, 10 and 11 Geo. IV, cap. 23 (1830) trustees to be appointed. Appropriation of £2,530 to complete it, 3 Wm. IV, cap. 13 (1833). Appropriation of £8,525 to build new wing, 16 Vic., cap. 156 (1852.) £5,680 to complete it, (1856) by 19, 20 Vic., cap. 86.
do	Old Custom House.	Cul-de-Sac St., Lower Town				Appropriation of £6,000 to erect it. 10-11 Geo. IV, cap. 33 (1830).
do	Parliament Buildings.	Mountain St., near Prescott Gate	Catholic Bishop of Quebec.	Aug. 1, 1831	Annual ground rent of £1,000.	Appropriation of £1,350 to complete it. 2 Wm. IV, cap. 45 (1832).
do	Governor's Residence.	On Sillery Road, Spencer Wood	Henry Atkinson	March 24, 1852	8,000 0 0	
do	do	do do	do	May 24, 1854	400 0 0	
do	do	do do	do	June 24, 1854	10,000 0 0	
Dundee	Custom House	Village Lot No. 6, Indian Reservation.	Hon. P. McGill	March 15, 1857	100 0 0	
do	do	do at St. Régis	Commissioner of Indian Lands.	Sept. 18, 1854	£3 15s. per year.	And pay £17 10s. to J. Oéité, for damages.

Montreal	Geological Museum.	On St. Gabriel St........................	Hon. P. McGill...........	Feb. 25, 1847	5,000 0 0	
do	New Jail.................	At Hochelaga, St. Mary St	....	....	....	Appropriation of £6,000 to erect it, 51 Geo. III, cap. 16 (1811). Two other lots were purchased, probably from Perrault and Logan, about July, 1839. £2,500 granted for additions by 18 Vic., cap. 4 (1854.)
do	High School	Lagauchetière and Belmont Sts , Beaver Hall.	H. Stephens..................	Sept. 14, 1852	4,500 0 0	
do	Post Office	St. François Xavier and St. James Sts., and Notre Dame St.	Rev. J. J. Vinet..........	do	2,000 0 0	
do	do	do do ...	Heirs Cuvillier and Delisle.	do	900 0 0	
do	do	do do near Jenkins..	Séminaire St. Sulpice ...	Dec. 28, 1853	3,333 6 8	
do	Lunatic Asylum	At Côte St. Antoine.......................	C. N. Montizambert, Commissioner for the erection of the Montreal Lunatic Asylum.	Jan. 14, 1861	At a yearly ground rent.	£2 19s. 8d., up to the year 1893, and thence for ever £19 17s. 2d. yearly.
do	Old Government House.	Notre Dame St. and Jacques Cartier Education Office, &c.	....	....	....	
do	do ...	do do do ...	F. W. & H. DesRivières.	July 12, 1849	4,000 0 0	
do	do ..	do do do ...	Royal Institution for the advancement of learning.	Oct. 13, 1858	2,320 0 0	
do	do ..	St. Paul St. do do ...	C. S. Rodier..................	Dec. 12, 1866	1,375 0 0	
do	Custom House........	St. Paul and Commissioners' Sts., near wharf.	....	....	....	Appropriation of £4,500 to erect it, by 6 Wm. IV, cap. 11 (1836). By 4 Wm. IV, cap. 13 (1834), Commissioners are appointed to select site.
Hamilton	Post Office	Lot No. 56, East of St. James St.........	Ed. Ritchie	Aug. 12, 1853	2,000 0 0	
do	do	Lot on Rebecca St............................	Isaac Buchanan	 1854	475 0 0	By O. C. 1,227, of 5th Oct., 1853, Commissioners are authorized to expend £500 for purchase of this site.
do	Custom House.......	Part of Block No. 20, Stuart St..	Moore & McKinstry......	June 20, 1855	2,000 0 0	
do	Gun Shed.............	Lot No. 31, West side Nelson St	Alf. Booker *et ux*	Dec. 31, 1857	250 0 0	
Sherbrooke......	New Jail...............	Lots on proposed streets, near Court House.	Corporation of the Town of Sherbrooke.	Aug. 19, 1865	No price	Site of old jail given by government in exchange for this lot.
do	Court House	do do near Montreal St ..	....	....	....	£3,300 appropriated to erect it by 2 Vic., cap. 38 (1839). Three Commissioners to be appointed to select the site.
Kingston	Post Office	Lot No. 50, Princess St......	Commercial Bank of the Midland District........	July 25, 1853	2,225 0 0	
do	Jail and Court House.	Lot on Church St............................	Municipality of County of Frontenac, Lennox and Addington.	Aug. 11, 1855	7,000 0 0	
do	Criminal Lunatic Asylum.	W½ lot No. 18, 1st con. Kingston..... ...	J. C. Crookshank	Oct. 21, 1856	5,000 0 0	

APPENDIX No. 27.—List of Public Buildings, &c., belonging to Government.—*Continued.*

Where situated.	For what purpose acquired or used.	Description and situation of Property.	Vendors.	Date of Sale.	Price of Sale.			REMARKS.
					£	s.	d.	
Kingston	Hospital							Appropriation of £3,000 to erect it, 2 Wm. IV, cap. 28 (1832). £500 appropriated in aid of Hospital by 7 Wm. IV, cap. 98 (1837).
do	Provincial Penitentiary.	On Lake Ontario						3 Wm. IV, cap, 43 (1833), £12,500 granted to erect it. Commissioners appointed.
London	Post Office	Lot No. 11 on North St. and on William St.	W. & J. Carling	Feb. 4, 1857	2,160	0	0	
Ottawa	Parliament and Departmental Buildings.	Barrack Hill, Wellington St., &c						Ordnance property.
Orillia	Branch Lunatic Asylum.	On Brant St., Market St. and Lake Couchiching.	E. E. W. Hurd *et al.*	Aug. & Sept. '59	4,200	0	0	
St. Vincent de Paul.	Reformatory Prison or Lunatic Asylum	Lot and buildings at St. Vincent de Paul.	Fabrique St. Vincent de Paul.	Dec. 27, 1861	4,500	0	0	
Grosse-Ile	Quarantine	River St. Lawrence						Appropriation to purchase it, 6 Wm. IV, cap. 21 (1836). Sum to be fixed by arbitrators.
Toronto	Post Office	Lot on Toronto, King, Yonge and Adelaide Sts.	E. F. Whittmore	Aug. 2, 1851	1,137	10	0	
do	do	do and King Sts	R. Johnson *et ux*	March 27, 1866	25	0	0	
do	Government Buildings.	Lot on John St. and Simcoe Place	Geo. Ridout	July 11, 1856	551	18	5	
do	Hospital							Appropriation of £250, by 7 Wm. IV, cap. 97 (1837) in aid of Hospital.
do	Provincial Lunatic Asylum.							Commissioners to be appointed to erect it, 2 Vic., cap. 11 (1839). Appropriation of £30,000 to complete it, 9 Vic., cap. 61 (1846).
do	Mechanic's Institute							
do	Parliament Buildings.	On Front St., Lake Ontario						
do	Elmsley Villa	On Simcoe and John Sts			250	0	0	Lease per annum.

PUBLIC BUILDINGS.

Date of Lease.	Term of Lease.	Lessees.	Lot.	Situation of Lot.	For what purpose used.	Area of Lots.	Amount of Water power Leased.	Date from which Lease is reckoned.	Amount Rental.	Terms of Payment.		
										Amount of each Instalment.	When 1st Instalment became due.	When payable each year.
									$ cts.	$ cts.		
		QUEBEC.										
7th Feb., 1865.	1 year.	Joseph Brooke.	House & Lot	Known as Monument Hotel on the Bonner Property	Dwelling	35 × 80 ft.	....	1st May, 1865.	80 00	20 00	Quarterly in advance	1st May, 1865.
		KINGSTON.										
1st Aug., 1851.	15 years.	Aug. Thibodo	Cottage & Lot	On Bagot Street.	do	....	....	1st Jan., 1852.	*60 00	....	....	....

* 3 years free of rent for repairs.

BONNER PROPERTY—(Near Quebec).

Date of Deed or of purchase by them.	Purchasers.	No.	Description of Lots.			Annual Rent.	Terms of Payment.			
			Street.	Area.	Rente foncière. Capital.		When due each year.	Amount of half yearly Instalment.	When 1st Instalment was due.	Amount of 1st Payment.
	Lots sold by John Bonner to			Front. Feet. × Depth. Feet.	£ s. d.	£ s. d.		£ s. d.		£ s. d.
Jan. 24, 1848	Timothy Sullivan	1	Wolfe Street	35 × 80	108 6 8	6 10 0	April 30, Oct. 31	3 5 0	April 30, 1848	1 15 0
August 12, 1848	*John Baily	9	do	35 × 80	83 6 8	5 0 0	do do	2 10 0	Oct. 31, 1848	1 8 7
Feb. 21, 1848	Robt. Reed	22, 23	do	35 × 80 each	150 0 0	9 0 0	do do	4 10 0	April 30, 1848	1 14 6
March 20, 1848	Geo. Creely	31	do	35 × 80	83 6 8	5 0 0	do do	2 10 0	do	0 8 11
Sept. 2, 1847	Jean Chevalier	32	do	35 × 80	83 6 8	5 0 0	do do	2 10 0	Oct. 31, 1847	0 16 4
August 28, 1845	Joseph Davies	34	do	35 × 80	100 0 0	6 0 0	do do	3 0 0	do 1845	1 0 0
do 9, 1851	Rebecca A. Davies	35	do	35 × 80	83 6 8	5 0 0	Nov. 1, May 1	2 10 0	Nov. 1, 1851	1 5 0
Sept. 18, 1845	Abraham Thompson	49	do	35 × 80	75 0 0	4 10 0	April 30, Oct. 31	2 5 0	Oct. 31, 1845	0 10 9
Feb. 23, 1852	John Laebatz	64	do	35 × 86	34 4 0	2 1 0½	do do	1 0 6½	April 30, 1848	....
Feb. 18, 1848	Daniel Holden	65, 66	do	27 × 80 North Line.. 60 South.	133 6 8	7 17 2	do do	3 18 7	do	1 13 5
Feb. 20, 1852	Noël H. Bowen	67, 68.	Monument Street	66 × 35 each	38 14 0	2 6 5	do do	1 3 2½	do 1852	....
March 4, 1852	John Boomer	73, 74.	Tower Street	35 × 70 each	36 19 0	2 4 4	do do	1 2 2	do	....
Feb. 20, 1852	†Thos. MeAdam	135.	Church Street	35 × 70	15 15 0	0 18 11	do do	0 9 5½	do	....
do	John Garbatz	211, 252	Ware Street	35 × 70 each	27 18 0	1 13 6	do do	0 16 9	do	....

* Sold to Alex. Powell on the 6th March, 1866. † Abandon.

APPENDIX No. 27.—List of District Court Houses and Jails, Lower Canada.

Chefs-lieux where situated.	Districts.	Date of Deed transferring site to Governm't.	Name of Co. Council transferring site to Govern't or vendors.	REMARKS.
Aylmer (Town)	Ottawa	Oct. 6, 1849	Ruggles Wright	
Beauharnois (Town)	Beauharnois	Feb. 17, 1859	Beauharnois	
Chicoutimi (Village)	Chicoutimi	March 2, 1860	Collard, Guay & Co.	£750 granted to build it, by 16 Vic., cap. 156 (1852).
Industrie do	Joliette	June 13, 1860	Joliette	
Montmagny (St. Thomas de)	Montmagny	Nov. 14, 1857	Montmagny	
Montreal (City), Jail	Montreal			No Deed. £20,000 appropriated to erect it, by 10-11 Geo. IV, cap. 31 (1830), and by Wm. IV, cap. 14 (1834), £1,592 6s. 1d. appropriated to complete and enclose it.
do do Court House	do			No Deed. Tavern licences appropriated to erect it, by 13-14 Vic. cap. 94 (1850).
New Carlisle (County of Bonaventure).	Gaspé			No Deed. £1,000 appropriated to erect it, by 48 Geo. III, cap. 35 (1808).
Percé (County of Gaspé), Court House	do			No Deed. £1,000 appropriated to erect it, by 48 Geo. III, cap. 35 (1808). £1,000 to continue it, 54 Geo. III, cap. 9 (1814). £2,100 to complete it, by 1 Geo. IV, cap. 20 (1821).
Quebec (City), New Jail	Quebec	Feb. 8, 1860	J. F. Bradshaw	See Bonner property, purchased for New Jail, Page 325.
do do Court House	do			No Deed. A sum granted to improve it. 55 Geo. III, cap. 9 (1815).
Sherbrooke (Town), Court House	St. François			No Deed. £3,300 granted by 2 Vic., cap. 38 (1839), to purchase site and erect building.
do do Jail	do	Aug. 19, 1865	Town of Sherbrooke	£2,000 were granted to erect old jail, by 4 Geo. IV, cap. 3 (1824). The site of old jail given in exchange for the new jail lot. £15,000 granted to erect new jail, by 29 Vic., cap. 2 (1865).
Sorel (Town), Jail and Court House	Richelieu			No Deed.
St. Christophe d'Arthabaska (Parish)	Arthabaska	Feb. 5, 1859	N. A. Beaudet	
St. Etienne de la Malbaie (Parish)	Saguenay	March 26, 1859	Hon. J. M. Fraser	
St. Germain de Rimouski (Parish)	Rimouski	Oct. 1, 1859	Rimouski	
St. Hyacinthe (City)	St. Hyacinthe	Aug. 7, 1860	City of St. Hyacinthe.	
St. John's (Town)	Iberville	Dec. 27, 1860	Town of St. John's	
St. Joseph de la Beauce (Parish)	Beauce	Feb. 16, 1860	St. Joseph de la Beauce	
St. Louis de Kamouraska (Parish)	Kamouraska	May 31, 1850	J. G. Taché *et al*	
Ste. Scholastique (Village)	Terrebonne		Two Mountains	
Sweetsburg, near Nelsonville (Village)	Bedford	May 15, 1858	C. C. Kathan	
Three Rivers (City), Jail	Three Rivers			No Deed. 51 Geo. III, cap. 17 (1811), appropriates £400 to purchase site, and £1,943 to build on it.
do do Court House	do			No Deed. 57 Geo. III, cap. 17 (1817), appropriation of £8,000 to purchase site and erect building, and 1 Geo. IV, cap. 14 (1821). grants £3,401 8. 3d. to complete it.
Amherst (Island), Jail and Court House	Magdalen Islands	Sept. 4, 1861	J. T. Coffin, lease for 99 years	£3,200 granted to erect it, by 29-30 Vic., cap. 8 (1866).
Sault Ste. Marie, do	Algoma, Canada West.			No Deed. $4,000 granted to erect it, by 23 Vic., cap. 15 (1860),

APPENDIX No. 27.—List of County or Circuit Court Houses, Lower Canada.

COUNTY.	PARISH OR VILLAGE.	Sums granted by Government to the Municipality by cap. 110 of the Con. Stats., L. C.	Date of Deed transferring site to County Municipality.	By whom transferred to County Municipality.
		£		
Argenteuil	Lachute	300	June 5, 1867	T. Barron.
Bagot	St. Liboire	300		
Bellechasse	St. Michel de Bellechasse	300	Nov. 3, 1859	L. Launière.
Berthier	Village of Berthier	300	March 20, 1860	Village of Berthier.
Brome	Knowlton	300	May 17, 1858	Rev. R. Lindsay *et al.*
Chambly	Longueuil	300	Nov. 12, 1866	Village of Longueuil.
Champlain		300		
Chateauguay	Ste. Martine	300	..., 1859	
Compton	Cookshire, (Township Eaton)	300	..., 1859	Township Eaton.
Dorchester	Ste. Hénédine	300	March 13, 1861	Parish Ste. Hénédine.
Drummond	Drummondville	300	April 10, 1858	R. N. Watts.
Hochelaga		150	No Court to be	held in this County.
Huntingdon	Huntingdon (Village)	300	June 15, 1859	Village of Huntingdon.
Iberville	Iberville (Town)	300	Sept. 12, 1860	Town of Iberville.
Jacques-Cartier		150	No court to be	held in this County.
Laprairie		300		
L'Assomption	L'Assomption (Village)	300	Oct. 13, 1857	P. R. Fauteux.
Laval		150	No Court to be	held in this County.
Levis		300		
L'Islet	St. Jean Port Joli	300	Oct. 4, 1858	C. F. Fournier.
Lotbinière	Ste. Croix	300	June 7, 1861	A. Hamel *et ux.*
Maskinongé	St. Antoine de la Rivière-du-Loup	300	May 12, 1859	St. Antoine, Riv. du Loup.
Mégantic	Inverness	300	Sept. 9, 1859	J. Mooney.
Montcalm	Ste. Julienne de Rawdon	300	Sept. 9, 1857	J. E. Beaupré.
Montmorency		300		
Napierville	Napierville (Village)	300		
Nicolet		300		
Pontiac	Portage du Fort	300		
Portneuf		300		
Quebec		150	No Circuit Court	to be held in this County.
Richmond	At Danville and in Village of Richmond	300	May 12, 1859	T. Tait.
Rouville	Ste. Marie de Monnoir, or Marieville	300	Jan. 29. 1859	A. & L. E. P. Laberge.
Saguenay (or Charlevoix)	Baie St. Paul	300		
Shefford	Waterloo (Township Shefford).	300	April 1, 1859	Robinson & Kilborn.
Soulanges	Côteau Landing	300	June 9, 1858	Village Côteau Landing.
Stanstead	Stanstead Plains	300		
St. Maurice		150	No Court to be	held in this County.
Temiscouata	St. Jean Baptiste de l'Ile Verte.	300	... 1859	
Terrebonne	St. Jérôme	300	Dec. 30, 1858	Village St. Jérôme.
Vaudreuil	Vaudreuil (Village)	300	May 19, 1859	R. W. Harwood.
Verchères	Verchères do	300	Sept. 3, 1859	Widow F. X. Colette.
Wolfe		300	No Court to be	held in this County.
Yamaska	St. François	300	Feb. 22, 1859	Mrs. J. M. Côté.

REMARK.

For description of Public Buildings—See Appendix No. 21—John Page, Chf. Eng., Ottawa Buildings.
Do No. 22—F. R. Rubidge, Assist. Eng., Rideau Hall.
Do No. 23—G. F. Baillairgé, C.E., Public Buildings of Canada.

Appendices Nos. 25, 26, 27. Certified,
H. A. FISSIAULT.

OTTAWA, 16th November, 1867.

APPENDIX No. 28.

STATEMENT shewing the annual Expenditure for repairs and working Expenses of the Canals, from 1st January, 1860, to 30th June, 1867.

YEAR.	ST. LAWRENCE CANALS.								WELLAND CANAL.		ST. OURS LOCK AND DAM.	
	LACHINE CANAL.		BEAUHARNOIS CANAL.		CORNWALL CANAL.		WILLIAMSBURGH CANALS, OR The Farran's Point, Rapide Plat and Galops Canals.					
	Repairs.	Working expenses.	Repairs.	Working expenses.	Repairs.	Working expenses.	Repairs.	Working expenses.	Repairs.	Working expenses.	Repairs.	Working expenses.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1860	17,339 47	10,755 57	3,314 82	9,400 27	5,348 00	8,226 39	4,125 06	5,793 27	23,301 28	43,011 32	3,601 63	1,267 95
1861	10,752 81	12,269 34	6,482 56	9,294 21	3,524 47	8,874 71	5,771 71	5,861 67	16,932 11	39,807 88	1,734 94	1,219 20
1862	10,705 09	12,288 64	6,366 96	9,503 45	3,292 88	9,381 80	5,724 00	5,852 97	22,120 73	39,129 49	1,141 57	1,204 12
1863	9,608 10	11,391 14	6,113 33	8,857 31	2,089 74	10,089 61	3,818 44	6,046 12	15,392 02	40,855 98	2,008 70	1,210 70
1st Jan., 1864, to 30th June, 1864..	5,299 97	3,906 41	2,572 14	3,138 76	1,395 23	3,168 83	1,179 64	2,062 19	6,564 57	16,074 94	181 13	491 86
1st July, 1864 do 1865..	9,590 50	12,333 80	5,177 00	9,520 90	2,612 52	9,929 68	4,185 86	5,780 54	19,440 17	41,446 89	827 52	1,275 23
1st July, 1865 do 1866..	11,241 20	11,664 65	9,156 34	9,456 45	2,727 83	10,191 15	3,233 66	5,792 76	22,137 70	39,029 73	901 26	4,232 54
1st July, 1866 do 1867..	12,437 48	12,445 72	7,093 04	9,490 09	3,493 96	10,234 88	3,221 06	5,634 29	26,357 65	36,650 23	1,566 47	1,242 17

APPENDIX No. 28.—*Continued.*

YEAR.	CHAMBLY CANAL.		STE. ANNE LOCK.		CARILLON AND GRENVILLE CANALS.			RIDEAU CANAL.		
	Repairs.	Working expenses.	Repairs.	Working expenses.	Repairs.	Working expenses.	Extra-ordinary repairs.	Repairs.	Working expenses.	Extra-ordinary repairs.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1860	10,041 56	5,956 26	815 87	934 58	6,398 51	3,693 65	....	5,097 91	17,213 99	5,074 40
1861	6,351 42	6,124 82	1,205 24	507 70	3,191 48	4,104 20	....	4,617 59	16,990 46	6,155 12
1862	10,400 12	5,893 83	1,758 29	459 98	3,336 06	4,089 62	356 75	5,941 41	17,290 75	37,894 74
1863	8,430 62	6,022 50	78 52	464 82	4,935 54	4,105 24	....	5,631 22	17,537 08	1,832 13
1st Jan., 1864 to 30th June, 1864	4,392 00	2,916 24	....	100 17	3,551 16	1,751 12	....	4,457 48	7,295 28	2 80
1st July, 1864 do 1865	7,125 08	6,042 89	1,197 13	533 43	5,213 35	4,263 12	4,615 51	8,584 31	17,889 13	6,809 83
1st July, 1865 do 1866	6,527 13	6,865 15	332 29	518 67	1,394 92	4,283 17	7,192 88	9,922 26	18,298 15	1,172 01
1st July, 1866 do 1867	8,522 78	7,768 53	733 38	510 71	12,494 37	5,164 38	7,288 05	12,654 56	18,516 11	10,523 01

J. BAINE,
Book-keeper.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th June, 1867.

APPENDIX No. 29.

(No. 85,136.)

STATEMENT of Expenditure on account of the Welland Canal, shewing distinctively the Amounts disbursed on account of Old and New Works; the latter being chiefly applied to the enlargement of the Canal.

WHEN PAID.	Old Works.	New Works.	Total.	REMARKS.
	$ cts.	$ cts.	$ cts.	
Prior to the Union...	1,851,427 77	....	1,851,427 77	Of this amount $1,751,427.77 was paid under authority of various Acts of Upper Canada, and the balance, $100,000, by the Government of Lower Canada.
In 1842................	....	138,895 55	138,895 55	
1843................	3,500 00	596,629 42	600,129 42	
1844................	87,426 75	884,898 58	972,325 33	
1845................	64,457 77	696,048 32	760,506 09	
1846................	8,885 00	116,407 67	125,292 67	
1847................	....	255,514 93	255,514 93	
1848................	300 00	356,900 43	357,200 43	
1849................	1,550 00	641,568 67	643,118 67	In this amount is included $408,100.97, expended under special appropriations since the Union charged to the Consolidated Fund and carried to acconnt this year under authority of Act 12 Vic., cap. 5.
1850................	1,460 00	236,853 42	238,313 42	
1851................	500 00	118,192 11	118,692 11	
1852................	434,432 07	82,297 98	516,730 05	
1853................	10,115 91	37,065 92	47,181 83	
1854................	1,074 18	60,702 80	61,776 98	
1855................	500 00	96,290 83	96,790 83	
1856................	....	61,088 39	61,088 39	
1857................	1,964 93	64,739 65	66,704 58	
1858................	....	81,294 56	81,294 56	
1859................	....	47,647 50	47,647 50	
1860................	....	67,874 63	67,874 63	
1861................	....	85,466 93	85,466 93	
1862................	....	52,454 82	52,454 82	
1863................	500 00	46,293 67	46,793 67	
In half-year ending 30th June, 1864...	....	16,628 00	16,628 00	
In year ending 30th June, 1865.........	....	76,696 37	76,696 37	
do 1866.........	....	22,458 30	22,458 30	
do 1867.........	....	7,016 00	7,016 00	
Total.............	2,468,094 38	4,947,925 45	7,416,019 83	

The payments on account of Old Works since the Union have been made to original stockholders by the issue of debentures under Acts 4 and 5 Vic., cap. 48, and 7 Vic., cap. 84.

WM. DICKINSON,
D. I. G.

INSPECTOR GENERAL'S OFFICE.

DESCRIPTION

OF THE

WORKS AND REPAIRS EXECUTED

DURING THE YEAR ENDING 30TH JUNE,

1867.

APPENDIX No. 30.

(No. 570.)

REPORT BY J. G. SIPPELL, ENGINEER.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE CANALS UNDER HIS CHARGE, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

Lachine Canal Office,
Montreal, 10th August, 1867.

F. Braun, Esq.,
Secretary, Public Works Dept., Ottawa.

Sir,—In compliance with your instructions of the 15th June, I have prepared and beg to submit the following report on the Canals under my charge for the year ending the 30th June, 1867 :—

These works consist of the Lachine and Beauharnois Canals, on the St. Lawrence River Navigation, the St. Ours and Chambly Canals on the Richelieu River and Lake Champlain route, and the Ste. Anne, Carillon, Chute à Blondeau and Grenville Canals on the Ottawa River between Lachine and Ottawa City.

LACHINE CANAL.

This Canal, which forms a navigable channel, past the Lachine Rapids in connection with the St. Lawrence River Navigation, also forms the connecting link between the Ottawa River Navigation, the lower St. Lawrence and Richelieu River improvement, to Lake Champlain. All the sawed lumber, agricultural and other products transported by water from the valley of the Ottawa River, must pass through this Canal in transit to the Montreal, Lower St. Lawrence or American markets.

There is also a large number of vessels trading with ports on the Lower St. Lawrence, the State and City of New York and the coal fields of Pennsylvania, that enter this Canal to discharge and secure cargo; many of them in connection with the extensive manufacturing and milling interests between the Côte St. Paul Lock and Basin No. 2 at Montreal.

The business on the basins, wharves and flour-sheds, which form a considerable portion of the harbor accommodation at Montreal, is annually increasing, and they are complained of as being quite too limited. Increased accommodation could easily be furnished by completing St. Gabriel Basin and enlarging and extending Basin No. 2.

The navigation has been successfully maintained throughout the year with nine feet water on the sills of the locks, without materially interfering with the supply of water required by the milling and manufacturing interests.

The banks, slope walls and mechanical structures generally, have been kept in good repair.

Three and a-half pairs of gates that were removed from Locks Nos. 1, 2 and 5, were thoroughly overhauled, repaired and sunk in July, August and September. The side walls in the race leading from the large waste weir at Messrs. Tates' Dry-dock, were faced with timber to protect them from the action of water discharged through the weir.

The bridges over the waste and regulating weirs were replanked. The swing and permanent bridges at Lock No. 2, Wellington Street, Brewster's Road, Côte St. Paul and Lachine, and the crib work protecting the centre piers were repaired during the winter. Four new bumping posts were placed on the abutment walls for the protection of the new bridge at St. Gabriel Lock; 130 feet of the timber docking, below Brewster's Bridge, was rebuilt, and the angular boom at the entrance to the regulating weir at Lachine repaired. The lock-gates and mitre sills were examined and repaired. The walls of Locks Nos. 3 and 4 were throughly pointed and grouted; the chambers and recesses of the locks, and such portions of the Canal as required it, cleaned, when the water was out of the Canal, in April. The dredge has been employed cleaning deposit from Basins Nos. 2 and 4 and the prism of the Canal opposite St. Gabriel Basin, and between St. Gabriel, or Lock No. 3, and Brewster's Bridge. The channel of the old Canal above St. Gabriel Lock and entrance to Cantin's Dock, has also been deepened.

During the months of May and June, the banks, protection walls and wharves were repaired, and the superstructure of the wharf below St. Gabriel Lock rebuilt. The flour-sheds, store-house and lock houses, at Locks Nos. 3 and 5, were also repaired.

The expenditure for ordinary repairs during the year amounts to $13,244.56, and for working the steam-dredge $5,412.15, making a total expenditure of $18,656.71.

The Canal was closed on the 12th day of December, 1866, and opened on the 1st day of May, 1867.

A detailed statement of the fines and damages levied by the local Superintendent for the year, will be forwarded herewith.

The following amounts have been collected on this Canal, besides water rents and regular tolls, viz.:—

Fines and damages by order of the Superintendent	$162	00
Dues on firewood at Lachine	271	51
" on timber in basin at Lachine	1,345	79
" for use of Canal grounds for repairing vessels	223	75
" for use of graving dock at Montreal	436	25
" on vessels from lower ports, firewood, &c	3,215	05
Storage in flour-sheds	1,402	90
Wintering vessels in Canal	490	50
Amounting to a total of	$7,547	75

BEAUHARNOIS CANAL.

The low water in the River St. Lawrence, referred to in report for the year ending the 30th day of June, 1866, continued until after the close of navigation in December. The passenger steamers that usually pass down the rapids between Lake St. Francis and Lake St. Louis at this season, were obliged to go through the Canal where the full depth of nine feet on the sills was maintained throughout the navigable season.

The entrance to the head-race for supplying water to the mills at the east end of the dam at Valleyfield was deepened by dredging, in August and September, and an effort made to remove a shoal at the entrance to the race at the west end; very little was however accomplished, the material consisting of hard grave land boulders which the dredge could not remove. The head-race at this end of the dam has been extended for supplying water to drive a large woollen factory recently built by Messrs. Wattie & Co., on Lot No. 2.

On the 15th day of September the bridge at Lock No. 14 was unshipped by a barge when partially opened, which caused a delay of six hours at this lock. On the 14th day of November there was a further interruption of twenty-three hours at Lock No. 12, when the lower gates were carried away by the steam gunboat "Royal." The upper gates being open at the time, there was no means of stopping the flow of water through the lock or any way of controlling it below, where the locks and banks were flooded, causing more or less damage, filling the ditches and in two or three instances covering the adjoining lands with clay and gravel washed from the canal banks. The gates were badly broken; they have, however, been repaired and replaced. The banks have also been repaired and the land damages paid.

New knee-quoins have been placed on the lower gates at Lock No. 6, and the bumping posts renewed.

The walls of Lock No. 7 have been pointed, one of the bumping posts renewed and one of the upper gates removed, repaired and replaced. One of the bumping posts at Lock No. 9 has been repaired and new fenders of oak timber placed on the lower gates.

The lower gates at Lock No. 11 have been removed for repairs, and the swing-bridge repaired. The lower gates at Lock No. 12 have been thoroughly repaired and replaced and the walls of the regulating weir pointed. A portion of the bank on the north side of the weir that was washed away in January, when the water found its way below the frost, was repaired in April and the bridge painted.

The walls of the weir at Lock No. 13 were pointed and the gates repaired. The lower gates at Lock No. 14 have been removed, thoroughly repaired and sunk for spare gates; the lock walls and walls in race below the weir were also pointed and repaired. The old timber and plank covering to the race above the weir, which is 310 feet in length by 32 in width, has been renewed. Two road-bridges over the race have also been renewed

The locks were cleaned and the slope and protection walls repaired when the water was out of the Canal, in April.

The dams and dykes at the upper end of this Canal have not required much repairs, but the water in the St. Lawrence is now at its high stage, which will increase the cost of keeping these works in order.

The culverts and ditches were thoroughly cleaned, in July and August; and again in March, to prevent the lands on the south side of the canal from being flooded.

The lock houses received their usual repairs and are now in good order. A new storehouse and shed have been provided for the safe keeping of canal property. A large number of mooring posts have been renewed and such other repairs effected as were found necessary for the efficient maintenance of the works, all of which are in good working order.

The expenditure for repairs has been kept within the amounts authorized, and amounted to $7,960.63, which includes the cost of repairing the damages caused by the gunboat "Royal" in November last.

The expenditure for dredging at the entrance of the races for supplying water to the mills at each end of the dam, amounted to $370.93, and for opening the head-race to Lot No. 2, $353.60, making a total of $724.53.

A statement of the amount collected for fines and damages, during the year, is also forwarded.

The Canal was closed by ice on the 8th day of December, 1866, and opened the 29th day of April, 1867.

RICHELIEU RIVER IMPROVEMENT.

This river forms the outlet to Lake Champlain, and empties into the St. Lawrence at Sorel, about 45 miles below the City of Montreal. The improvements for navigation consist of a lock and dam at St. Ours and the Chambly Canal.

ST. OURS LOCK AND DAM.

The navigation at this lock has been maintained throughout the current year with only eight hours' interruption, rendered necessary for adjusting the lower gates and repairing the sluices.

The repairs were confined to such structures as the safety and efficiency of the works required, viz.: repairing the scows, strengthening the piers at the lower and upper entrance of the lock, adjusting and repairing lock gates and fixtures, repairing buildings, strengthening and protecting the main dam and abutments with stone, 109 toise having been used for that purpose.

The cost of repairs for the year amounted to $1,772.50.

The lock was closed by ice on the 12th day of December, 1866, and opened for the passage of vessels on the 16th day of April, 1867.

CHAMBLY CANAL.

The repairs on this Canal between the first day of July and the close of navigation in December, were confined to such works as were required for the maintenance of navigation, viz. : cleaning ditches; repairing, walling and strengthening the banks; placing fenders of timber to protect the wing walls of the locks and bridges, renewing the superstructure of a portion of the wharf at St. Johns; repairing lock and bridge-tenders' houses; repairing the towing-path on Ste. Thérèse Island &c., &c.

On the 8th day of August the lower gates at Lock No. 9 at Chambly, were broken by a barge striking them when the lock was being emptied for its reception. These gates were badly broken, and as there were no spare gates on hand, they were hauled out, repaired and replaced, which caused a delay of four days. There were two other delays of six hours each for repairing sluice gates at Locks Nos. 4 and 6.

After the close of navigation, the lock and bridge tenders were employed as usual in repairing the mechanical structures, as follows, viz :

Placing two extra sluices in the upper gates at Lock No. 1, at St. Johns, to increase the facilities for supplying the Canal with water; building one new pair of lock-gates; repairing the gates at Locks Nos. 2, 3, 6 and 7 ; renewing the lower mitre-sill at Lock No. 8, rebuilding the timber-work in by-washes at Lock No. 6, at Fryer's and at Lapanne's.

During the month of April, the prism of Canal was cleaned, the slope and protection walls repaired, the masonry in the abutments at Bridges Nos. 2, 3, 4, 5 and 7 repaired and the walls at Locks Nos. 2, 3, 4, 5 and 6, pointed, &c., &c.

In the early part of May, the water was unusually high in the river which caused heavy slides in the Canal bank near St. Johns; these slides being on the inside slopes, required constant attention and much labor to prevent them from filling up the Canal and interrupting navigation. These damages are being repaired and other portions of the bank raised and strengthened.

The repairs for the current year amount to $9,135.84, which includes the cost of one pair of new lock-gates, repairing the lower gates broken at Lock No. 9 and such other damages as were caused by vessels while passing through the Canal, amounting to $457.70, as shewn by the annexed statement.

The Canal was closed by ice on the 12th day of December, 1866, and opened for the passage of vessels on the 1st day of May, 1867.

The trade on this route for the past season has been larger than for any previous year, and the prospects are favorable for a little larger increase this year.

The supply of water was maintained at 7 feet on the sills, but the prism of the Canal has in many places been contracted on bottom by clay washed from the banks and deposit from the farm ditches discharging into the Canal, so that the navigation is really reduced to vessels drawing 6 feet water. There is great difficulty in getting this deposit removed during the few days allowed for this work in April, and it is therefore important that one of the steam-dredges should be fitted without delay so that it can be used for cleaning this Canal.

LOCK AND DAM AT STE. ANNE.

This lock and wing dam forms the first improvement to navigation in the lower Ottawa, and was constructed to overcome the Rapid at Ste. Anne.

The repairs for the year amounted to $748.16, and were confined to keeping the gates in working order and repairing the guide piers above the lock.

On the 12th day of October the friction roller in the west lower gate parted in the centre, which allowed the toe of the gate to drop and prevent it from working, which caused a delay of 24 hours before a new roller could be procured, inserted and the gate put in working order.

There is a dangerous shoal between the lower end of the long pier below the lock and out side channel, on which several vessels are annually wrecked, although there are two channels past it. Masters of vessels and pilots say the current and eddies are so strong and changeable that at times it is impossible to avoid striking. It is therefore desirable that immediate action be taken for its removal, or for placing guard cribs on the shoal.

The guide cribs above, and the long pier below the lock, will require extensive repairs at season of low water.

The navigation was closed on the 5th day of December, 1866, while the river was free from ice, and opened for the passage of vessels on the 26th day of April, 1867.

CARILLON AND GRENVILLE CANALS.

These canals are situated on the north side of the Ottawa River and form a navigable channel past the Carillon, Chûte à Blondeau and Long Sault Rapids.

Early in March, tenders were received for repairing and improving these Canals with a view of increasing the depth of water to six feet, improving the upper entrance to the North River Feeder and forming new passing places in the narrow portions of the Grenville Canal.

The work was commenced about the 20th of March, but owing to unfavorable weather and other difficulties which the contractor failed to overcome, the contemplated improvements were not completed on the 1st of May as stipulated in the contract, when it became necessary to open the Canal. A large amount of work was done in cleaning the prism of Canal and passing places, but the new passing places were not completed—they can, however, be made available next year. The work of raising the banks and walls of Locks Nos. 9 and 10 and by-washes, was commenced early in May and is still progressing. As soon as the banks are raised, the depth of water will be increased to six feet on the sills at the locks; but the full benefit contemplated from this improvement will not be realised until the new passing places are completed and other portions of the prism of the Canal deepened and made wider at bottom. The upper entrance of the North River Feeder was widened and deepened which will admit a large supply of water for the Carillon Canal, should it be required.

CARILLON CANAL.

During the winter and spring, the north chamber wall of Lock No. 3 was taken down to surface of low water in the river and rebuilt, the upper mitre sill and other portions of the wall repaired, grouted and pointed. The sills and walls of Locks Nos. 1 and 2, at Carillon, were also pointed and grouted. The fence along the Feeder and between the Canal and road has been repaired.

The prism of the Canal was cleaned by the contractor, in April, and portions of the banks raised in May and June; when they are completed the water will be raised to six feet.

During the winter a small mooring crib was sunk 300 yards above Lock No. 3, for the accommodation of vessels waiting at the lock—two or three more are required.

CHUTE A BLONDEAU.

The repairs consisted in keeping the lock gates and fixtures in working order, repairing the lock-house and fences, and preparing stone for repairing the lower wing walls of the lock which are badly shaken by vessels striking them during high water.

Mooring cribs placed below this lock would facilitate the locking of vessels and protect the wing walls from being battered and broken.

The upper gates are old and should be renewed.

GRENVILLE CANAL.

The sluices and gates in combined Locks Nos. 5 and 6, at Grace's Point, have been repaired, the reach above cleaned and the banks raised, so that the water is now kept at 6 feet on the sills.

The centre stone mitre sill between combined Locks Nos. 7 and 8, was renewed during the winter and the pier in the north wall above lower gates in Lock No. 8 taken down and rebuilt. A new pair of gates was inserted before opening the Canal in May and portion of the walls pointed. The walls of these locks are very much broken and must soon be rebuilt—the upper gates should also be renewed.

The Canal between Locks Nos. 8 and 9, was cleaned and the banks raised where required—the water is now kept at 6 feet on the sills. The passing place above Lock No. 8 was cleaned and much improved. The upper gates and sluices at Lock No. 9 have been repaired. These gates are old and must be rebuilt. The stones in the upper mitre-sill and breast wall are crumbling away—several of them have been replaced with wood; this sill and breast wall must be rebuilt next winter. The walls are being raised twelve inches with timber to afford a greater depth of water. Very little was done to the prism of the Canal between Locks Nos. 9 and 10, except cleaning the passing-places, which are much improved. A new passing-place was commenced by the contractor below Lock No. 10, but not completed; he is now raising the banks between these locks. After they are finished the water will be raised to six feet.

New lower gates have been inserted at Lock No. 10 and the sluices repaired. The walls and upper gates have been raised twelve inches with timber, and the banks between

Locks Nos. 10 and 11, raised where required. The old passing-places were cleaned and lengthened. The new passing-place in the narrow deep rock cutting below Lock No. 11, was not completed, and is therefore of little use this season.

The old gates in Lock No. 11, have been removed and new ones inserted, with larger sluices, which were required for supplying the Canal with water; they are now kept at 6 feet and 6 inches, between the Nos. 10 and 11, but this depth cannot be maintained during season of low water until the bottom of Canal is lowered at least 12 inches between Lock No. 10 and river which includes the guard lock at Grenville.

The supply of water for these Canals has been good throughout the year, and the navigation maintained with but few interruptions except such as were caused by overloaded vessels grounding on the slopes in the narrow portions of the Grenville Canal.

These Canals were closed on the 30th day of November, 1866, and opened on the 7th day of May, 1867.

The expenditure for repairs and improvements during the year, amounts to $24,686.54, viz :—

By contract	$11,589 42
By Superintendent..	13,097 12
Amounting to a total of	$24,686 54

CAUGHNAWAGA ROADS.

The sum of $653.13 has been expended in opening the side ditches and off-take drains and in gravelling and placing broken stone on the road-bed which is now in good order After a further expenditure of say $800, as per estimate, these roads should be self-supporting by the collection of a reasonable toll.

I have the honor to be, Sir,
Your obedient servant,
JOHN G. SIPPELL,
Resident Engineer.

LACHINE CANAL.

STATEMENT of Fines and Damages collected by order of the Superintendent, for the year ending the 30th June, 1867.

Date.	Name of Vessel.	Master or Owner.	Amount.	REMARKS.
1866.			$ cts.	
July 2.....	Scow St. Jean Baptiste..	....	15 00	Damage to Brewster's Bridge.
14.....	Schooner Emma	....	5 00	Discharging cargo contrary to regulations.
27.....	Propeller America	Norris & Neelan	20 00	Fined for obstructing Lock No. 1.
Aug. 31.....	Barge Odo	M. & O. F. Co..	5 00	Violation of Canal Regulations.
Sept. 4.....	Crib of cord wood..........	H. Pigeon	10 00	Abandoned and obstructing navigation.
5.....	3 Crib's Bottoms..........	Gariepy	15 00	Violation of Regulations.
6.....	Schooner Catherine	....	5 00	Damage to Lock No. 2.
7.....	Propeller Brune......	....	12 00	do Lock No. 4.
27.....	2 Cribs of saw logs.......	Allan...............	10 00	Fined—obstructing Basin.
Oct. 10.....	Steamer Salaberry.........	B.C. & H.N.Co.	5 00	do violation of regulations.
Nov. 7.....	Scow St. Francis	Portelance	10 00	do do do
20.....	Schooner Josephine......	....	5 00	Damage to stone pillar Bridge No. 1.
30.....	Crib of Timber	Tucker	10 00	Fined—violation of Regulations.
1867.				
May 18.....	Brig Alarm	....	5 00	Damage to Lock No. 1.
21.....	Schooner Marie.............	Perrault..........	10 00	do do No. 3.
23.....	Schooner Son & Heir ...	Murray............	10 00	do do No. 4.
Juin 26.....	Propeller East...............	Chaffey	10 00	do do No. 4.
			162 00	

(Signed,) ALEX. BISSETT,
Superintendent.

LACHINE CANAL OFFICE,
Montreal, July, 1867.

BEAUHARNOIS CANAL.

Statement of Fines and Damages collected by order of the Superintendent, for the year ending the 30th June, 1867.

Date.	Name of Vessel.	Name of Owner.	Amount.		Remarks.
1866.			$	cts.	
....	C. Y. Richmond...........	Bradley & Co...	17	00	Damage to Lock No. 10.
Aug. 7.....	Barge Experiment..	Larkins..........	3	60	do do No. 8.
11.....	Steamer Rothsay Castle.	Leach & Co.....	18	00	do do No. 7.
Sept. 2.....	Yacht Wanderer..........	Gen. Lindsay...	8	75	do do No. 10.
5.....	Propeller East	McLennan&Co.	6	00	do do No. 8.
5......	Propeller City of London	N. S. Trans. Co.	40	00	Violation of Canal Regulations.
14.....	Barge Ste. Zotique........	Elie	58	00	Damage to Bridge No. 14.
Oct. 13.....	Propeller Whitby.........	Proctor...........	24	00	do do No. 8.
			175	35	

(Signed,) PIERRE LAURENCEL,
Superintendent.

Beauharnois Canal Office,
July, 1867.

ST. OURS LOCK AND DAM.

Statement of Damages collected by order of the Superintendent for the year ending the 30th June, 1867.

Date.	Name of Vessel.	Master or Owner.	Amount.		Remarks.
1866.			$	cts.	
July 8.....	Barge Canadienne	Marchand	0	47	Damage to scow.
1867.					
June 5.....	Barge Maggie Travis....	Belleville	0	93	do to crib.
5.....	Steamer Rover	Francœur	0	93	do to pier.
			2	33	

(Signed,) LEVI LARUE,
Superintendent.

St. Ours Lock,
July, 1867.

CHAMBLY CANAL.

STATEMENT of Fines and Damages collected by order of the Superintendent, and Wharfage Dues, for the year ending the 30th June, 1867.

Date.	Name of Vessel.	Name of Owner.	Amount.		Remarks.
1866.			$	cts.	
July 6	Tranchemontagne	Beaulac	2	00	Refusing to move when ordered.
12	Ban	Smith	8	00	Damage to Bridge No. 2.
14	Thurso	Allan	2	00	do Lock-gate No. 6.
17	C. D. Nichols	Richard	1	45	do do No. 6.
17	Indian	Dickinson	1	00	do do No. 8.
Aug. 8	Steamer Whitehall	McNaughton	10	00	do do No. 3.
8	No. 28	do	300	00	do Gates, Lock No. 9.
15	Zephir	Allard	3	00	do Bridge No. 5.
23	C. Marcil	Dickinson	1	00	do Lock No. 6.
27	Providence	Cinq-Mars	1	00	do Bridge No. 7.
Sept. 3	Nero	Dickinson	2	85	do do No. 5.
3	Raft	Hagar	4	00	do do No. 5.
6	Burlington	H. Lumber Co.	2	00	do do No. 7.
20	Augusta	McNaughton	2	00	do Gate, Lock No. 1.
Oct. 12	St. Jules	Rock	2	50	do do No. 8.
15	J. Baptiste	Duval	2	00	do do No. 2.
16	do	do	1	50	do do No. 9.
23	Raft	Hagar	2	00	do Bridge No. 6.
25	St. Louis	Tranchemontagne	15	00	do do No. 4.
25	Forth	McNaughton		50	do Lock No. 8.
Nov. 1	Perle	Desjardins	1	00	do do No. 8.
2	Billow	Conn	2	00	do do No. 3.
2	Kate	Dickinson	2	00	do do No. 9.
3	Louisa	Couvrette	10	00	do do No. 7.
3	Forest	do	2	00	do Bridge No. 1.
6	Arabian	Léveillée	2	00	do Lock No. 4.
6	Mary	Charland	15	00	da Bridge No. 7.
7	Martha	Dickinson	2	00	do Lock No. 6.
7	Herriman	do	1	00	do do No. 6.
8	Ann	do	8	00	do do No. 5.
8	Martha	do	1	00	do do No. 5.
15	Berthier	Labrique	8	00	do do No. 1.
16	Louisa	Couvrette	2	00	do do No. 5.
16	Ash	Allan	5	00	Fine—Violation of Canal Regulations.
16	Providence	Desmarais	5	00	Damage to Lock No. 6.
20	Caroline	Tranchemontagne	2	00	do Bridge No. 7.
25	Anna	McNaughton	1	90	do Lock No. 6.
Dec. 4	Elk	Auger	8	00	do do No. 6.
4	Bruno	do	3	00	do do No. 3.
4	Convoy	do	10	00	do do No. 4.
4	Bruno	do	8	00	do do No. 6.
4	Victor	do	2	00	do do No. 9.
1867.					
May 3	St. Joseph	Métivier	1	00	do do No. 5.
			464	70	
	Wharfage dues for the year ending 30th June, 1867		24	64	
	Total		489	34	

(Signed,) C. PRÉFONTAINE,
Superintendent.

CHAMBLY CANAL OFFICE,
Chambly, July, 1867.

STE. ANNE LOCK AND DAM.

STATEMENT of Fines and Damages collected for the year ending 30th June, 1867.

Date.	Name of Vessel.	Owner.	Amount.	REMARKS.
1867.			$ cts.	
May 9.....	Barge First.................	J. B. Auger.....	7 00	Damage to guard post.
11.....	Steamer Wood...........	Allan...	7 00	do do
			14 00	

(Signed,) JOHN BARRETT,
Collector of Tolls.

STE. ANNE LOCK, July, 1867.

STE. ANNE LOCK AND DAM.

COMPARATIVE STATEMENT of the Number of Steamers, Sailing and other Craft that passed through the Ste. Anne's Lock, during the fiscal years ending 30th June, 1866 and 1867, and the amount of Tolls collected.

VESSELS.	1866.			1867.		
	No.	Tons.	Amount of Tolls.	No.	Tons.	Amount of Tolls.
			$ cts.			$ cts.
British Steamers.....................	1,220	57,926	$6,037 29	1,410	64,973	7,413 56
Sailing and other craft	4,282	303,309		5,016	368,135	
American Vessels.....................	228	15,950		250	17,834	
	5,730	377,185	$6,037 29	6,676	450,942	7,413 56
				5,730	377,185	6,037 29
Increase in 1867	....	....	....	946	73,757	$1,376 27

(Signed,) JOHN BARRETT,
Collector.

STE. ANNE LOCK, July, 1867.

CARILLON AND GRENVILLE CANALS.

STATEMENT of Fines collected by order of the Superintendent, and Dues on Firewood, for the year ending 30th June, 1867.

Date.	Name of Vessel.	Master or Owner.	Amount.	REMARKS.
1866.			$ cts.	
July 1.....	Steamer Alice..	Bobillard.........	2 00	Obstructing entrance of Lock No. 3.
27.....	Barge Bee.....................	J. B. Auger.....	2 00	Abusing Master, Lock No. 3.
Aug. 17.....	Barge L'Etoile	P. Bertrand.....	2 00	Taking forcible possession of do
1867.				
June 14.....	Steamer Aid	A. Poitras	10 00	Violation of Canal Regulations.
			16 00	
	Dues collected on firewood piled on bank, &c.,4413 cords at 2 cts.	....	88 26	
	Total............	....	104 26	

(Signed,) WM. B. FORBES,
Superintendent.

CARILLON AND GRENVILLE CANAL OFFICE,
30th June, 1867.

APPENDIX No. 31.

(No. 890.)

REPORT BY D. A. McDONELL, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE CORNWALL CANAL DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

F. Braun, Esq., Cornwall, 19th Sept., 1867.
Secretary, Public Works Dept., Ottawa.

Sir,—In reply to your instructions of 17th instant, I beg to hand you, combined into one, the substance of my reports of the works under my charge for the six months ending the 31st December, 1866, and 30th June, 1867, respectively.

I also return the enclosures in your letter (Nos. 26 and 27).

I have the honor to be, Sir,
Your obedient servant,
D. A. McDONELL.
Superintendent.

F. Braun, Esq., Cornwall, 30th June, 1867.
Secretary, Public Works Dept., Ottawa.

Sir,—I beg to submit the following report on the works connected with the Cornwall Canal, from the 30th June, 1866, to the present time.

The navigation continued, without interruption, until the 13th December, 1866, when it was closed by ice.

The principal works undertaken within that period consisted in raising embankments, slope walls, cleaning culverts, &c., and sundry other necessary repairs.

In my report to the Department, dated the 18th December, 1866, I presented a statement exhibiting the probable cost of certain further repairs, including the building of a bridge, estimated for the whole $4,100.

On the 6th February, 1867, I was authorized by your letter No. 61,455, to expend this amount.

The nature and cost of the work executed under the foregoing authority, is as follows, viz:—

Raising the south embankments, repairing slope walls, cleaning side ditches, drains and culverts, repairing lock gates, repairing canal scow, making twelve new sheaves, and rebuilding the swing-bridge at Cornwall, cleaning lock chambers and removing ice from wharfs, the entire amounting to $2,401.44.

The Canal, in the present year, was opened on the 30th April.

I have the honor to be, Sir,
Your very obedient servant,
D. A. McDONELL,
Superintendent.

APPENDIX No. 32.

(No. 130.)

REPORT BY ISAAC N. ROSE, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE WILLIAMSBURGH CANALS, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

F. Braun, Esquire, Morrisburgh, 1st July, 1867.
Secretary, Public Works Dept., Ottawa.

Sir,—In compliance with your circular letter of instructions, No. 62,926, dated the 15th of June, 1867, I have the honor to submit my annual report of the works under my charge during the fiscal year ending 30th June, 1867.

The navigation continued without interruption, from the 1st of July to the 11th of December, 1866, when it was closed by the severity of the weather. It was again opened on the 30th of April, and maintained in good working order up to the 30th of June, 1867; no detention of any importance having occurred to vessels passing through during that period.

The works which have been in progress during the past year, may be classed under the head of ordinary repairs.

In lining the banks with stone, the force employed consisted of one scow, a foreman with five laborers, and a horse for towing purposes. The works were confined to the Galops, Iroquois and Rapide Plat Canals, continuing from the 1st of July to the 6th of December, 1866, and from the 15th of May to the 30th of June, 1867.

Four hundred rods have been stoned and filled in with earth on the inside of the river bank; repairs have also been made to portions of the outside of the bank to protect them from injury by high water. It is highly necessary that this work be continued.

One pair of new lock gates has been put in Lock No. 25, Iroquois Canal.

Repairs have also been done to the lock gates, wharves, bridges, boats, scows, snubbing posts and booming in connection with the several Canals.

The Buoy Service has been performed and is now in good order from Dickinsons' Landing to Prescott.

Having thus given a description of the work done during the year ending 30th of June, 1867, I may further state that preparations have been made and timber procured to complete the breakwater pier on the outer side of the lower entrance of Farran's Point Canal, and the ice-breaker at the upper entrance of the outer pier at the head of Rapide Plat Canal; but the water in the River St. Lawrence being unusually high this season, I thought it advisable to defer these works until the fall, as they could not have been built advantageously from the time I received authority to proceed with the work.

The booming at Point Iroquois Canal has been so long in use as to be nearly worn out. Almost every vessel passing through, breaks some portions of it, thus causing considerable outlay. These booms when constructed were intended to prevent vessels from striking points of rock projecting from the sides of the Canal, and when built this Canal had its upper outlet into the river, there being no guard lock; but a junction has since been formed with the Galops Canal, and I believe the banks are now sufficiently secure to allow the water to be drawn off with safety and the rocky projections removed. This being done, the booms might be dispensed with or their width much diminished.

The bridges over Lock No. 25, Point Iroquois, and Lock No. 26, Galops Canal, require to be rebuilt—particularly the one at Iroquois on which there is a large amount of travel in consequence of the mills situated on the south side of the Canal. This bridge, although in use, is in an unsafe state and prompt steps should be taken to have it rebuilt. The one at Galops Canal is completely worn out, and has not been in use for several years. Its want is much felt by the inhabitants in the immediate vicinity.

The Steam-dredge continued working in the Galops Canal from the 1st of July until the close of the season. There were 656 scow loads of material removed from the prism of the Canal and deposited in deep bays adjoining. She was then towed to the Rapide Plat Canal, and laid up for the winter. Having completed, in the months of April and May, the repairs necessary, she commenced work, on the 27th of the latter month, in the Rapide Plat Canal, and up to the 30th of June had removed from the bottom of the canal, 192 scow loads of material. This work should be continued to completion, which will probably occupy from two to three months.

The aggregate of pay lists and accounts for Steam-dredge, from 1st July, 1866, to 30th of June, 1867, is $2,966.02.

The aggregate of pay lists and accounts for Buoy Service and repairs, from 1st July, 1866, to 30th June, 1867, is $2,466.71.

The aggregate of pay lists and accounts of Staff certified, from 1st of July, 1866, to 30th of June, 1867, is $5,370.67.

Thus you will perceive by deducting the expenditure for Buoy Service and general repairs from amount authorized for the last half year, viz; $3,500, there remains a balance of $2,166.77 which will be required to meet expenditure on works already authorized, viz; Farran's Point Canal and head of Rapide Plat Canal; and on bridges at Locks No. 25, Iroquois Canal, and No. 26, Galops Canal; and should be reserved for that purpose, as the amount forms part of the 1st items in my estimate for the next six months, ending 31st of December, 1867.

All of which is respectfully submitted,

I have the honor to be, Sir,
Your obedient servant,

ISAAC N. ROSE,
Supt. Williamsburgh Canals.

* * *

APPENDIX No. 33.

(No. 249.)

REPORT BY S. D. WOODRUFF, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE WELLAND CANAL DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

WELLAND CANAL OFFICE,
St. Catharines, July 5th, 1867.

F. BRAUN, Esquire,
Secretary, Public Works Dept., Ottawa.

SIR,—I have the honor, in compliance with the instructions conveyed to me in your letter, No. 54,222, to submit my annual report of the works under my charge during the fiscal year ending 30th June, 1867.

The great quantity of ice in Lake Erie, did not admit of an earlier opening of the Canal than the 23rd day of April. For several days after, the winds shifted the ice, so as at times to completely block up the harbor, at Port Colborne, by which a large number of vessels were many days detained.

The canal was closed on the 11th of December. The interruptions in the navigation caused by vessels carrying away the gates of locks Nos. 14 and 17, and one gate at No. 20, have been three; thereby causing a suspension of six days, in the aggregate. These repairs were promptly made from the spare gates available. Others have been put in hands, to replace those used in making these repairs, so as to keep a sufficient supply of spare gates to meet casualties. The cost of making these repairs has been collected.

CONSTRUCTION.

The only works of construction in hands, has been the making of a fish slide in the Dunnville dam, and putting boom timbers on the East side of the Rock Cut, between Stone Bridge and Port Colborne.

These works are completed.

REPAIRS.

The Repairs have been the maintenance of the works of the Canal, by the renewal of those fallen into decay, from long use, or the replacing those carried away from collision of vessels, comprising: the replacing of gates at locks Nos. 1, 13, 14, 17, 20 and 24; and bridges at lock No. 24, and the Quaker Road, towing path bridge, at Thorold; repairs of the gates at lock No. 2, and the gates of the Mountain and Dunnville locks; bridges at locks Nos. 1 and 2, St. Catharines, 15 Thorold, Hurst's, Marlatt's, Allanburgh, Port Robinson, Quaker, Burger's, Welland, Junction, Humberstone, Broad Creek and Dunnville; replanking a large portion of the floating towpath, and the other towpath bridges; repairs of Port Maitland west pier; raising and protecting the embankments from wash, with stone, gravel, &c., &c.; the construction of 3 gates for lock No. 1, and 4 for the Mountain range of locks, with 1 pair for the Allanburgh lock, and 2 for Colborne lock.

The cost of making these repairs for the fiscal year has been $22,824.08. There has been collected for repairs of damages done by vessels, charged in the foregoing repairs, $4,169.

In the Deep Cut several slides have taken place, one of them of a serious character, by which the channel was considerably more than half closed, for over 300 feet.

The depth of water originally was 20 feet, but the slide reduced it to 13 feet, and the channel to 30 feet in width, quite sufficient for the passage of vessels. But as it was apprehended that as the frost left the ground the material would slide, so as to further diminish the channel, a new arrangement was made with Mr. John Brown, contractor, to clean out the slide with one of his dredges. He has, so far, excavated a channel 60 feet in width, and 14 feet depth of water, affording ample room for 2 vessels to pass.

Judging from what has already taken place, the appearance of the slides, the nature of the bottom and the banks of the cut, it is not possible to adopt any effective preventive measures to guard against a recurrence of slides, further than to be fully prepared for the removal of them when they do occur. It therefore seems necessary that two powerful steam dredges, with scows, should be provided for that purpose.

The probable cost of completing the works connected with the Lake Erie level will be $172,000, for the following works, viz. : Removal of rock below Ramey's Bend ; Deepening Canal from Ramey's Bend to Colborne Lock, and removal of loose stones in the Rock Cut ; securing embankment along the old Canal, in section No. 22 ; removal of piles standing above Canal bottom ; deepening the channel, from the Lock at Port Robinson to the Canal ; construction of a waste weir and channel thereto, at the Junction, for the regulation of the water in the Feeder ; construction of boom timbers in the Rock Cut ; facing the slopes of the Canal banks with gravel, to protect them from wash ; securing the towing-path at the float bridges, &c., &c., &c. The superstructure of the piers at either end of the Canal is much decayed, and will shortly require a considerable outlay for their renewal.

No provision has yet been made for the erection of offices for the accommodation of the Collectors at Ports Robinson, Maitland and Dunnville, where the Canal business is transacted in insecure buildings, much exposed to fire. Suitable buildings may be put up at these places for $5,000.

RENTS.

The annual Rental of the water-power and other property leased on this Canal is	$18,759.10
The amount collected during the fiscal year is	15,239 27
The amount remaining due on 1st July is	15,181.79

A considerable portion of the arrears became due on the 30th June, and will shortly be collected. Upon other holdings the premises have been either burned or abandoned, but a small part of them will be realized.

Schedule No. 1, appended, gives a list of the several holdings.

LANDS SOLD.

The only sale of lands remaining unsettled is that to the Municipality of the County of Welland, for the purchase of the "Great Cranberry Marsh Lands Tract," comprising 12,912 acres, situate in the Townships of Humberstone and Wainfleet, at the price of one dollar per acre, payable in ten equal annual instalments, with interest at six per cent. per annum, from the 2nd of May, 1853. Upon this there have been paid two instalments and interest, amounting to $3,309.56. There remains due $10,329.60, with interest from the 2nd of May, 1854.

DAMAGES, &C., COLLECTED.

Schedule No. 2 gives a list of the vessels, &c., upon which penalties have been imposed and collected, for damages done to the banks, and for breaches of the Canal regulations. The amount collected is $4,263.90.

The foregoing is respectfully submitted.

I have the honor to be, Sir,
Your obedient servant,

S. D. WOODRUFF,
Superintendent.

WELLAND CANAL.

SCHEDULE No. 1.—Statement shewing the Annual Rents of Water-Power leased, and the Rents of other property situate on the line of the Welland Canal, with Yearly Rents, together with Arrears of Rent, the payments made during the Fiscal Year ending 30th June, 1867, with the balances due.

Where situate.	Lessees.	Machinery.	Yearly Rent.	Arrears to 30th June, 1867.	Payments to 30th June, 1867.	Balance due 1st July, 1867.
			$ cts.	$ cts.	$ cts.	$ cts.
Port Dalhousie.	R. Laurie & Co	Grist mill	187 30	280 95	187 30	93 65
Do ...	R. J. & W. Laurie	Flouring mill	240 00	360 00	240 00	120 00
Do ...	R. & J. Laurie	Lot ¼ acre	20 00	30 00	20 00	10 00
Do ...	R. Morrison	Saw mill	121 00	181 50	60 50	121 00
Do ...	Alexander Muir	2 Dock lots	176 00	264 00	176 00	88 00
Do ...	George A. Clark	2 Wharf lots	100 00	160 00	60 00	100 00
Do ...	Donaldson & Andrews	Dry dock	100 00	200 00	100 00	100 00
Do ...	James Moore	Lot	20 00	40 00	....	40 00
Lock 2	Michael Kearins	do	10 00	15 00	....	15 00
Do	John L. Ranney	Flouring Mill	260 00	520 00	....	(*a*) 520 00
Lock 3 to 11...	St. Catherines Water Power Company	Surplus water	500 00	750 00	500 00	250 00
St. Casherines..	Calvin Phelps	Flouring mill	150 00	225 00	150 00	75 00
Lock 4	Calvin Phelps	Wharf lot	40 00	60 00	40 00	20 00
Do 5	R. Collier	Saw-mill	167 66	251 49	83 83	167 66
Do 10	Thomas Jones	Grist-mill	140 00	280 00	140 00	(*a*) 140 00
Do 11 to 22...	Welland Canal Loan Co.	Surplus water	480 00	720 00	480 00	240 00
Do 12, 13, 14..	Gordon & McKay	Cotton factory	240 00	360 00	....	360 00
Do 16..	John Brown	Cement mill	160 00	240 00	80 00	160 00
Do 20	Wm. B. Hendershot	Saw-mill	181 00	362 00	181 00	181 00
Do 21	Wm. Beatty	do	216 00	324 00	216 00	108 00
Do 22	Wm. Beatty	Tannery	63 60	95 40	63 60	31 80
Do 23	Wm. H. Ward	Machine shop	50 00	75 00	75 00	....
Do 23	Wm. H. Ward	Saw-mill	146 00	219 00	73 00	146 00
Do 23	John Brown	Wharf	40 00	60 00	20 00	40 00
Do 24	Jacob Keefer	Flouring-mill	222 00	333 00	222 00	111 00
Do 24	Brown & Ross	do	130 00	195 00	65 00	130 00
Do 24	Park & Cowan	do	160 00	1,040 00	....	(*a*)1,040 00
Do 25	John Brown	Cement-mill	80 00	120 00	40 00	80 00
Do 25	Alex. Christie	Flouring-mill	160 00	1,048 37	....	(*b*)1,048 37
Thorold	Chitty & Woodward	Cotton factory	100 00	remitted &	no water	used.
Allansburgh ...	Wright & Duncan	Flouring-mill	270 67	1,082 70	....	(*b*)1,082 70
Do ...	Wm. H. Merritt, Jr	Saw-mill	87 10	261 30	....	(*b*) 261 30
Do ...	J. & H. Bowman	Pail factory	66 00	231 00	....	(*b*) 231 00
Do ...	Tucker & Rannie	Saw-mill	330 00	575 00	425 00	150 00
Do ...	Wm. Pennock	Shingle factory	66 00	132 00	....	(*b*) 132 00
Do ...	P. S. Mussen	Lot ¼ acre	20 00	20 00	20 00	....
Port Robinson..	J. & J. Abbey	Dry dock	150 00	225 00	75 00	150 00
Do ...	Abbey & McFarland	do	79 20	742 00	....	(*b*) 742 00
Do ...	Donaldson & McFarland	Grist-mill	86 00	129 00	....	129 00
Do ...	R. Baird & Co	do	206 00	568 00	465 00	103 00
Do ...	John Donaldson	Wharf lot	8 00	12 00	4 00	8 00
Marshville	Killens & Dockstader	Saw-mill	156 00	234 00	78 00	156 00
Do ...	Dunlop & Seeley	Grist-mill	216 00	324 00	216 00	108 00
Do ...	Dunlop & Seeley	Saw-mill	214 00	1,177 00	....	(*b*)1,177 00
Do ...	E. Seeley	Old aqueduct	20 00	60 00	40 00	20 00
Do ...	M. Cook	Grist-mill	192 00	288 00	192 00	96 00
Do ...	E. Mead	Wharf lot	25 00	128 65	....	(*b*) 128 65
Do ...	A. Sherwood	do	25 00	138 80	....	(*b*) 138 80
Junction	John A. Hellmes	do	25 00	112 00	....	(*b*) 112 00

WELLAND CANAL.—*Continued.*

Schedule No. 1.—Statement shewing the Annual Rents of Water Power leased, and the Rents of other property situate on the line of the Welland Canal, with Yearly Rents, together with Arrears of Rent, the payments made during the Fiscal Year ending 30th June, 1867, with the balance due.

Where situate.	Lessees.	Machinery.	Yearly Rent.	Arrears to 30th June, 1867.	Payments to 30th June, 1867.	Balance due 1st July, 1867.
			$ cts.	$ cts.	$ cts.	cts
Marshville	John Graybiel	Grist & Saw-mill.	160 00	240 00	160 00	80 00
Broad Creek...	L. McCallum...............	Saw-mill............	143 00	214 50	....	214 50
Port Maitland..	Imlack & Hickes............	Grist-mill	138 00	828 00	....	(*a*) 828 00
Dannville.......	Jacob Turner	do	180 00	270 00	....	270 00
Do	Samuel Darling	do	86 67	130 00	....	130 00
Do	L. J. Weatherly	Carding works ...	53 34	53 34	....	53 34
Do	H. Mittlebarger..............	Saw-mill...........	77 34	354 68	....	(*b*) 354 68
Do	Chisholm & Muir.....	do	138 67	208 02	69 34	138 68
Do	A. S. St. John...............	Grist-mill...........	120 00	960 00	....	(*a*) 960 00
Do	Brown & Merritt............	Plaster-mill	113 00	169 50	....	169 50
Haldimand......	Oldfield & Noxen...........	Saw-mill............	237 34	1,081 53	....	(*a*)1,081 53
Do	J. Clark & Brother..........	do	66 67	100 02	....	100 02
Do	J. C. & R. H. Kirkpatrick..	Grist-mill...........	153 34	230 01	....	230 01
Do	Beatty & Baird	do	149 20	223 80	149 20	74 60
Port Colborne ..	A. K. Schofield	Wharf lot...........	25 00	37 50	12 50	25 00
Do ...	John Gordon..	Wood-yard..	25 00	50 00	50 00	....
Dunnville........	C. J. Brydges.................	Water-pipes........	20 00	20 00	10 00	10 00
			8,759 10	20,421 06	5,239 27	15,181 79

The arrears have accrued mostly from the premises having been burned, or the privileges abandoned; from such the water has been some time shut off.

These arrears marked (*a*) and (*b*) amount to $9,978 03, and are made up as follows:—

The premises burned and marked (*a*) amount to....................	$4,569 53	
And those marked (*b*), from which the water has been shut off, amount to	$5,408 50	$9,978 03

A large part of the remaining balances accrued on 30th June, and will shortly be collected.

S. D. WOODRUFF,
Superintendent.

Welland Canal Office,
St. Catharines, 5th July, 1867.

WELLAND CANAL.—*Concluded.*

Schedule No. 2.—Shewing the Amounts Collected from Vessels, &c., for damages done to the Works, and committing breaches of the Canal Regulations, during the fiscal year ending 30th June, 1867.

YEAR.	NAMES OF VESSELS.	AMOUNT.		REMARKS.
1866.		$	cts.	
July 3........	Scow Sacramento..................	5	00	Violating Canal Regulations.
" 3.......	Propeller Indian.....................	10	00	Damage to Colbourne Lock.
" 4.......	Schooner Saranac...................	8	00	do Berger's Bridge.
" 4........	" Mary Mutan......	10	00	Violating Canal Regulations.
" 19........	" Rapid	6	00	Damages to Gate at Lock No. 15.
" 19........	Barque Southampton..............	10	00	Violating Canal Regulations.
" 24........	Schooner Anglo-Saxon...........	5	00	Damage to Port Robinson Bridge.
Sept. 3.......	" Jessie	34	00	do Lock No. 7.
" 5........	" John Rae.................	25	00	do Lock No. 11.
" 6........	Raft Cameron.........................	13	00	Shut, paid tolls.
" 6........	" Caufield	4	00	do do
" 19........	Barque Jacques De Maley......	10	00	Damages to Lock No. 22.
" 22........	Scow Hattie............................	10	00	Violating Canal Regulations.
Oct. 9........	Barque Etowah......................	1,000	00	Gates, &c., of Lock 14.
" 18........	Schooner Princess Alexandria..	10	00	Damages at Lock 17.
" 29..... ..	" Tubal Cain...............	50	00	do Colburne Lock.
" 29........	" Walrus	23	00	do Lock No. 24.
Nov. 8........	" Chieftain................	60	00	do Dalhousie Bridge.
" 9........	Barque Twilight.	100	00	do Thorold do
" 22........	Propeller North.....................	50	00	do Bridge at Lock No. 4.
" 22........	Schooner Kearsage.................	42	90	Shut, paid tolls.
1867.				
Feb. 19........	Tug Gordon..............................	293	00	Damages to Welland Bridge.
May 1........	Schooner Muskingham...........	14	00	do Stone do
" 17........	" Eureka.........	10	00	do Lock 1.
" 17........	" J. Cochrane............	20	00	do Port Robinson Bridge.
" 21........	" Clyde...............	2	00	do Marlett's Bridge.
" 25........	Propeller Bruno.....................	306	00	Gate at Lock 20.
June 22..	" East.....................	2,133	00	Gates, &c., at Lock 17.
		$4,263	90	

S. D. WOODRUFF,
Superintendent.

Welland Canal Office,
St. Catharines, 5th July, 1867.

APPENDIX No. 34.

(No. 247.)

REPORT BY S. D. WOODRUFF, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE BURLINGTON BAY CANAL, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

WELLAND CANAL OFFICE,
St. Catharines, 5th July, 1867.

F. BRAUN, Esq.,
Secretary, Public Works Dept., Ottawa.

SIR,—I have the honor to submit my annual report for the fiscal year ending the 30th ultimo, as required by your letter, No. 54,222, of that date, connected with the Burlington Bay Canal.

The piers forming the sides of this Canal are, generally, in a good state of repair, and no expenditure upon them has been called for during the past year. It has, however, been necessary to repair some damages caused by the collision of a vessel, the cost of which will be defrayed by the sum levied upon the vessel. The ferry recesses will require some repairs when the water lowers.

I have the honor to be, Sir,
Your obedient servant,

S. D. WOODRUFF,
Superintendent.

APPENDIX No. 35.

(No. 238.)

REPORT BY J. D. SLATER, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE RIDEAU CANAL, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

OTTAWA, 10th July, 1867.

No. 237. SIR,—I have the honor to transmit a report shewing a description of the works as they exist at the present time. (*See Appendix No.* 7, *at page* 59.)

No. 238. 2nd. A Statement of works and repairs executed during the year ending 30th June, 1867.

No. 239. 3rd. Estimated cost of repairs for the half year ending 31st December, 1867. *Not published*

I have the honor to be, Sir,
Your obedient servant,

JAMES D. SLATER,
Superintendent, Rideau Canal.

F. BRAUN, Esq.,
Secretary, Public Works Dept., Ottawa.

RIDEAU CANAL.

Statement of works and repairs done during the year ending 30th June, 1867 :—

The principal repairs and works done during the past year are seven pairs of lock gates renewed, three bridges, very extensive repairs at Kingston Mills, and sundry repairs at the different stations, as follows:—

OTTAWA, FIRST EIGHT LOCKS.

Sundry repairs to iron works and machinery, also to sills and masonry; new boom at Dow's swamp, 1,200 feet long; new swing bridge and embankment approaches, Mutchmor's cut; straightening and widening cut at Ottawa; macadamizing Sapper's Bridge.

HARTWELL'S.

Small repairs to iron works.

HOGSBACK.

Sundry repairs to iron works, also to boom; new flat dam to replace old one, 116 feet long, and 8 feet high; improvement to stop logs of bulk head; chains fastened to three bottom courses of logs.

BLACK RAPIDS.

One new pair of lock gates complete. Sundry small repairs to works.

LONG ISLAND.

Sundry small repairs; 150 yards of stone to strengthen dams and embankments; planks procured to repair upper bulk head; new bridge with swing at Beckett's Landing.

BURRITT'S RAPIDS.

Sundry small repairs to iron works. Wood work to crab renewed.

NICHOLSON'S.

Sundry small repairs to works; sheeting lower gates of upper lock, and putting on new foot boards; new swing bar on lower gate, lower lock, sheeting lower lock; new mitre post, and repairs to heel post, &c.; renewing woodwork of wooden crab, and several new sheave and coping blocks.

CLOWE'S QUARRY.

Fifty yards coarse gravel delivered for repairs to embankments; small repairs to machinery.

MERRICKVILLE.

Several small repairs to works below water; two pairs of new gates complete, including altering and repairing machinery of the same; removing old bulk head, west side of dam, and renewing the same, including new stop logs, chains and crabs; seven new stop logs supplied and made for upper lock; new entrance and platform to block-house; new mitre post, and sheeting basin gates; renewing wood work of crab.

KILMARNOCK.

New swing bar on lower gate; repairs to blocks and machinery, &c.; new sheave blocks, &c.

EDMONDS.

Small repairs to sluice frames, &c.

OLD SLYS.

New swing bars on lower gates; knee on lower gate; both gates strengthened; repairs to sluice frames of both gates; lifting centre gates to put in new truck wheels and frames; also, lifting caps below heel posts; sundry repairs to iron works and machinery; three new stop logs.

SMITH'S FALLS, COMBINED.

Renewing swing bars on lower gates; altering and repairing machinery of lower gates repairing sluice frames and sundry repairs to works below water, &c.; gravel supplied for repairs to lock walls, &c.

SMITH'S FALLS, DETACHED.

Small repairs to iron works and sluices.

POONAMALIE.

Renewing swing bars on lower gates, three new stop logs supplied and made; sundry small repairs to works generally.

NARROWS.

New swing bridge and approaches complete; pier 40 feet long, 16 feet wide, filled with stone to support and protect swing bridge; knees on upper gate, and sundry small repairs.

NEWBORO.

Two pairs new gates complete; altering and repairing machinery for new gates, refixing blocks, &c.

CHAFFEYS.

One pair new lower gates; sundry repairs to sluices and works generally; new footboards on upper gates.

DAVIS'.

New rail on upper gate; sundry small repairs to machinery, also sheeting gates.

JONES' FALLS.

New heel post and four new rails on centre high-gates, and sundry small repairs. Repairs to planking of apron.

BREWER'S UPPER MILLS.

Two new swing bars on upper gates; one new swing bar on lower gates; new journal bolts, and sundry repairs to sluice machinery; sundry repairs to swing bridge.

BREWER'S LOWER MILLS.

Some small repairs to machinery; 40 yards coarse gravel supplied for dams.

KINGSTON MILLS.

Lower gates renewed; larger coffer dam at foot of lock; lock pumped out, and sunken sill repaired and rebolted down; dam removed; all the works below water thoroughly overhauled and repaired; one pair of centre gates planked and strengthened; 213 yards of gravel supplied for repairing and facing up embankments; swing bridge repaired, new segments, &c.; segments of gates taken up and levelled and rebolted down; lock wall underpinned and pointed, and repairs to dry wall of Basin; splicing mitre post of high gates, and repairing sill of high gates; also, repairs to planking of apron, &c.

I have the honor to be, sir,
Your obedient servant,

JAMES D. SLATER,
Superintendent Rideau Canal.

OTTAWA, July 1st, 1867.

APPENDIX No. 36.

(No. 244.)

REPORT BY S. D. WOODRUFF, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED AT PORT DOVER HARBOR, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

F. BRAUN, Esquire,
Secretary, Public Works Dept., Ottawa.

WELLAND CANAL OFFICE,
5th July, 1867

SIR,—I have the honor to submit my annual report for the fiscal year, ending the 30th ultimo, as required by your letter, No. 54,222, of the work connected with the Harbor at Port Dover, Long Point Bay, Lake Erie.

The work of repairs authorized upon the river part of the West Pier, has been completed within the sum appropriated, viz., $1,600. The cost of these repairs has been $1,562.05. The balance of $37.95 may be cancelled.

The river part of this pier consists (within that upon which any repairs have been made) of two rows of piles driven into the ground, the upper parts of them are much decayed, and admits of the seas carrying deposits into the Harbor. For protection, it is proposed to construct a timber superstructure, and face a part with sheeting, at a cost of $1,400. If the Hon. Commissioner approves of the outlay, please authorize me to proceed with it.

I have honor to be, Sir,
Your obedient servant,

S. D. WOODRUFF,
Superintendent.

APPENDIX No. 37.

(No. 1,107.)

REPORT BY D. C. SMITH, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON LIGHT HOUSES ABOVE MONTREAL, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

F. BRAUN, Esquire, ODESSA, 2nd October, 1867.
Secretary, Public Works Dept., Ottawa.

SIR,—I beg leave to forward herewith, for the information of the Honorable the Minister of Public Works, my annual report, containing a statement of the works and repairs, which have been performed at the different Provincial Light-houses and Stations under my charge, from Lachine upwards, between the 1st July, 1866, and the 30th June, 1867.

The following works and repairs have been performed on the different Provincial Light and Dwelling-houses, Beacons, Buoys, &c., from Lachine upwards, from the 1st July 1866, to 30th June, 1867:—

FOUR LIGHT SHIPS, LAKE ST. LOUIS.

Taking them into winter quarters, repairing, painting, and putting them out to their moorings.

GROSSE POINT.

Apron pier repaired, lantern repaired on main light, also four light-houses painted, and floor repaired.

M'KIES' POINT.

Light and dwelling-houses painted, and slight repair made to dwelling.

BEACON, LAKE ST. FRANCIS

Replaced, levelled, and secured, with timber and stone.

CHERRY ISLAND.

Repairs made to Keeper's dwelling, floating light ship, Lake St. Francis. Raising her anchors and replacing her on her moorings, on Lancaster Bar. Taking her into winter quarters. Putting in new timbers, repairing and painting her on her moorings.

LANCASTER PIER.

Pier covered with plank, and three toises of stone put into it. Iron bars placed in windows and doors of light-house.

GRENADIER ISLAND.

Vane repaired, and floors in dwelling house painted.

LINDOE ISLAND.

Store-house erected. Plastering of dwelling-house repaired, and cellar drained. Sleepers in dwelling raised and leveled with stone.

JACK STRAW SHOAL.

Store-house erected.

BURNT ISLAND.

Store-house erected.

WOLFE ISLAND.

Putting new roof on dwelling house. Light and dwelling houses painted.

SNAKE ISLAND BAR LIGHT-HOUSE.

Old pier broken by ice, taken up, and replaced by a new one, with the addition of 20 feet in length.

NINE MILE POINT.

Painting and whitewashing light-house and repairing dwelling.

FALSE DUCKS.

Eave-troughs put up. Slight repairs made to dwelling-house, and store-house painted.

POINT PLEASANT, BAY OF QUINTE.

New lantern of iron put up, and fixtures made. New fence erected around the land purchased for light-house purposes.

POINT PETER, LONG POINT.

Top platform of light-house covered with lead; also, repairs and painting performed.

SCOTCH BONNET.

New door-frame made. Door and lantern repaired.

PRESQU'ILE RANGE LIGHTS.

Making anchor and chains for mooring small boat.

OAKVILLE HARBOR.

Lighthouse repaired, fitted up, and painted. Fixtures made, and light exhibited since 1st October, 1866.

PORT DALHOUSIE.

New fence erected around the land, and three gates made and hung.

PORT COLBORNE.

Top platforms of main and range lights covered with lead. Roof of dwelling house renewed: new sills and new flooring put in do.; windows repaired and a privy built.

BOIS BLANC.

Completing erection of breakwater. Draining cellar of dwelling house, and putting new floor in dwelling house with 2-inch oak plank.

RIVER THAMES.

New cover of zinc put upon light-house lantern, and slight repairs made.

NOTTAWASAGA ISLAND.

Slight repairs made.

CHRISTIAN ISLAND.

Slight repairs made.

POINTE CLAIRE PIER LIGHT.

Railing repaired, also slight repairs made to pier.

GREEN SHOAL.

Apron of pier repaired.

BUOYS.

Making and putting out three new buoys: one at Fiddler's Elbow, one below Grenadier Island Light-house, River St. Lawrence, and one at Snake Island Bar Light-house, Lake Ontario.

Putting out, taking up, and attending to eight buoys at the Bois Blanc Light-house, mouth of Detroit River.

Assisting in selecting and delivering supplies.

The above has been completed in a workmanlike manner.

All of which is most respectfully submitted.

I am, Sir,
Your obedient servant,

D. C. SMITH,
Superintendent Light-houses above Montreal.

APPENDIX No. 38.

(No. 167.)

REPORT BY D. BOULANGER, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE RIVER SAGUENAY, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

SLIDE, PETITE DÉCHARGE, SAGUENAY, June 30th, 1867.

F. BRAUN, Esquire,
Secretary of Public Works, Ottawa.

SIR,—For the information of the Honorable the Commissioner, I have the honor to present my annual report, shewing the state of the Saguenay works and the repairs made under my superintendence, for your Department, during the year ending the 30th day of June, 1867, to wit:—

From the 1st July, 1866, to the 30th April, 1867, the repairs which were executed to the piers at Lake St. John, and to the boom, amount to the sum of $637, of which $558.20 were expended under authority from the Department, in accordance with a letter dated 19th July, 1866, No. 59,056, authorizing the expenditure of $565, thus leaving a balance of $6.80, which was carried to the credit of the Saguenay works. The balance of $78.80 was expended on the boom, without previous authority, seeing the great necessity there was for repair. This sum has been entirely paid by your Department.

In my report of the 7th instant, I had the honor to call your attention to the accident caused by the great rise of the water. There were 130 feet of the slide carried away entirely by the logs which passed above the guide pier, and 100 feet are damaged. Since I have been employed as Superintendent, I have not seen the water so high. It rose 4 feet higher than during the preceding years.

As the time was short, necessity compelled some temporary repairs to be made, in order to avoid the loss of timber. I accordingly caused repairs to be commenced on the responsibility of William Price, Esquire, lest the Department might have objections to their being carried out.

I have the honor to transmit herewith the pay list of the cost of the works and improvements made to this day on account of the great flood, with the amount of my salary, and that of my assistant, as also that of the letter carrier.

The slide will be prepared to receive logs on the 1st July next; but there are a few unfinished repairs, the cost of which I will submit to you in my report from the 30th June to the 1st December next.

I have the honor to furnish you, also, with a list, shewing the quantities of timber which have passed the slide in the course of the month of July last year, viz.:—

White pine logs, 12 feet	31,825
Red do do	2,300
Tamarack knees, for building	65

In my report from the 1st of December last to this day, I mentioned the repairs necessary for the piers at Lake St. John: I have now the honor to inform you that the cost of these repairs will be mentioned in my report from the 1st July to the 1st December next.

I have the honor to be, Sir,
Your obedient servant,

D. BOULANGER,
Superintendent of the Saguenay Slide.

APPENDIX No. 39.

(No. 938.)

REPORT BY H. R. SYMMES, SUPERINTENDENT

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE RIVER ST. MAURICE AND ITS TRIBUTARIES, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

SUPERINTENDENT'S OFFICE, ST. MAURICE WORKS,
Three Rivers, Sept. 25th, 1867.

F. BRAUN, Esquire,
Secretary, Pub. Works Dept., Ottawa.

SIR,—I have the honor to submit for the information of the Department my annual Report relating to the work performed under my superintendence, and the state of the St. Maurice works generally, for the fiscal year ending 30th June, 1867.

CONSTRUCTION.

The past year an expenditure of $2,751.09 was authorized by the Department to construct mooring piers, side dams and one anchor pier, as follows:

At Shawenegan,—1st. Two mooring piers, 30 by 32 ft., and 28 ft. in height.

At La Tuque,—Two wing dams at mouth of Quinn's Creek. 3rd. One anchor pier 15 by 15 ft., and 8 feet high, above falls.

These works were made for $2,371.73; leaving a balance of the appropriation of $379.36 unexpended.

REPAIRS.

During the year, two appropriations were made for repairs, as follows:—

July 19th, 1866,—Departmental letter No. 59,052. . . .	$4,800
March 1st, 1867, " " No. 61,748.	1,000
	$5,800.

The repairs made may be briefly described as follows:

Booms at Mouth.—1st. Renewing 1,168 lineal feet of boom, 5 feet wide, 14 inches thick, employing 7,509 feet (cubic) of white pine timber, and 3,650 lbs. of iron.

2nd. Renewing piece of boom, 144 feet long, 6 feet wide, and 14 inches thick, employing 1,109 cubic feet of white pine timber, and 504 lbs. iron screw bolts.

3rd. 36 oak head blocks, 2,880 lbs. rag bolts and staples.

4th. Three large posts in piers.

5th. Tamarack post for boom gate.

6th. Repairing five piers, employing 1,654 cubic feet of timber, 2,343 lbs iron, six new posts, 129 cubic yards of stone, and 150 3-inch pine deals.

Shawenegan—7th. Strengthening 383 feet of boom.

8th. Renewing 200 lineal feet of boom, employing 936 cubic feet of pine and tamarack, 510 lbs. iron and six head blocks.

9th. Raising one pier, employing 1,949 feet of timber (cubic), 878 lbs. iron, and 193¼ cubic yards of stone filling.

10th. Raising three piers 3 feet, employing 1,308 cubic feet of pine timber, 687 lbs. of iron, 71½ yards of stone filling, and four mooring posts.

11th. Four tamarack posts for boom gates.

12th. Repairs to three piers at foot of chute, employing 525 cubic feet of timber, 650 lbs. iron, and 8 cubic yards of stone filling.

Grès Falls.—13th. Strengthening 500 feet of boom, $300.

Grand-Mère.—14th. 163 cross blocks on booms, with rag bolts.

15th. 500 feet lineal single booms, 14 by 18 feet.

La Tuque.—16th. Sundry repairs to booms and dams, $434.31.

Plamondon's Eddy.—17th. Raising two piers above high water mark, employing 4,509 feet of timber (cubic), 864 lbs. iron, 180 cubic yards of stone filling.

The foregoing repairs, estimated at $5,800, were made for $5,560.38, thus showing a balance on the appropriation of $239.62, unexpended.

One of the piers at Plamondon's Eddy was last spring partly upset by the ice. I do not think it would be advisable to have it repaired until the Department is prepared to build two other piers, as recommended in my last year's report.

STAFF AND WORKING EXPENSES.

The cost of staff and working expenses for the fiscal year is $9,074.73. Increase of wages, and increase in the production of lumber, causes a considerable extra expenditure from year to year, to the account of working expenses, which no effort to economize can wholly overcome.

The cost of all the operations on the St. Maurice for the year 1866–67 is therefore as follows:—

Construction, ...	$2,371 73
Repairs, ...	5,560 38
Staff and working expenses, ...	$9,074 73
	$17,006 84

GENERAL REMARKS.

During the past season the works have suffered no material injury, and have been in general very effectual. The long continued high water in the early spring, and the extreme low water which immediately followed, has made it an expensive season for bringing down lumber, both for the lumbermen and for the Government.

I would once more direct the attention of the Honorable the Commissioner to the fact that the sand has accumulated around the piers of the main booms at the mouth of the river to such an extent, that in even moderately low water it is almost impossible to get out the lumber. There appears to me but two ways to obviate the difficulty. The one is to carry away the sand with a dredging boat in high water, and the other is to construct new booms further up the river. The latter plan would be much the most beneficial to the trade generally.

I have the honor to be, Sir,
Your obedient servant,

H. R. SYMMES,
Superintendent.

* * *

APPENDIX No. 40.

(No. 78.)

REPORT BY HORACE MERRILL, SUPERINTENDENT,

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE OTTAWA AND ITS TRIBUTARIES, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

OTTAWA RIVER WORKS, SUPERINTENDENT'S OFFICE,
Ottawa, 1st July, 1867.

F. BRAUN, Esq.,
Secretary, Public Works Dept., Ottawa.

SIR,—In compliance with instructions received from your department, in communication No. 62,920, I have the honor to submit the following report on the works under my charge, for the year, from 1st day of July, 1866, to 30th day of June 1867:—

From 1st July to the end of the rafting season of 1866, square timber and saw-logs, descended the River Ottawa uninterruptedly and the public works were not damaged to a greater extent than by the tear and wear incidental to the passage of vast quantities of lumber.

Having been authorized to effect the necessary repairs at the various stations on the Ottawa and its tributaries, during the winter of 1866 and 1867, to prepare the works for the present timber "running" season, I have to state that at Joachims, Calumet, Mountain, Portage-du-Fort, Chats and Chaudière Stations on the main river, the slides, dams, booms and piers, were repaired where defective. On the "Rivière du Moine," the dams, and at the mouth of the stream, the boom, were strengthened and otherwise made more serviceable. On both branches, and on the main stream of the Petewawa River, the works were closely examined. On the south branch a series of single-stick slides and dams were put in a state of efficiency for the spring "drives." At Cedar Lake, on the north branch of the river, the spring flood had cut a channel around the shore end of one of the dams lately constructed, but the work of stopping the flow of water in this direction was undertaken at the earliest possible moment and was successfully accomplished. At Half Mile Rapids, a dam was repaired, and at the single stick-slides and dams situated at the 1st, 2nd and 3rd Chutes on the main river, such alterations and improvements were made as were found to be absolutely necessary. On the Madawaska River, the long slide at High Falls was overhauled and a portion of it replanked, while the booms there were lengthened and otherwise improved. At Burnstown, where there had been a break in the boom, certain new timbers were provided and repairs effected. The Flat Rapids dams having been, in places, stripped of their planking by the drifting timber and ice in the spring of 1866, steps were taken to replace such of the covering as had been carried away. At Arnprior Station, the head works of the slide and some of the booms were very much decayed and it became necessary to repair and strengthen them for this season's business.

In addition to the slide, or ordinary repairs carried out at the Ottawa or South Chaudière Station, the long wooden bridge crossing the slide and leading from the Upper Canada side of the river to the Union Suspension Bridge and Lower Canada, had its superstructure (for a distance of 386 feet) renewed. The timbers had become decayed and further travel on it would have been attended with considerable danger and risk. This bridge was formerly altogether too narrow for the traffic on so important a thoroughfare (say 18 feet), and when the superstructure was being renewed, a 6 feet outside walk was constructed for pedestrians. This additional accommodation to the public, together with a small increase in the width of the roadway, will have the effect of rendering the crossing less inconvenient and dangerous, but the bridge is not yet so wide as it should be. Pooley's Bridge, within the limits of this City, was replanked.

At the Gatineau Station, new pickets were placed on a portion of the boom, and the upper courses of timber of certain piers were renewed and strengthened.

The opening of navigation having taken place at a much later date than usual, this spring, timber and saw logs from the remote tributaries of the Ottawa, did not reach the

Government works on any of the streams until the season was somewhat advanced. Although the local spring freshets, and what is commonly known here as the " North Water," have kept the Ottawa at a uniform flood height for some weeks past, the works under my charge have not been damaged to any appreciable extent, except at three stations, viz. :—At the head of the Chats Rapids, at the head of the Chenaux Rapids and at the Gatineau Station. At the first-mentioned place the ice on leaving the Chats Lake, swept off the tops of two of the snubbing piers. At the Chenaux, a band of timber, on the 11th ultimo, carried away a portion of the guide boom, but it can be replaced as soon as the pitch of water will admit of it. At the Gatineau, the new wooden bridge constructed in 1865, over the new Canal leading from the river to the pond, has been carried away.

The Gatineau boom, through the carelessness of parties driving saw logs, in contravention of the rules and regulations established by Order in Council, gave way on the 14th day of May, and saw-logs, variously estimated at from 2,000 to 4,000, escaped. By law it is provided that not more than 15,000 logs shall be in the boom at one and the same time, but instead of this regulation being observed, parties in charge of logs turned them adrift recklessly until as many as from 70,000 to 90,000 were allowed to accumulate in the boom, and although every exertion was made to relieve it of the pressure by the staff on the works, the heavy mooring chains at the upper end gave way, and hence the escape of a portion of the logs. The gap was speedily closed however, and by the men working night and day, the over-strained boom was cleared and the safety of the logs and works insured.

At certain stations, such as Joachims, Calumet, Mountain and South Chaudière, on the Ottawa, High Falls on the Madawaska and at Black River Slide, certain portions of the works are old and dilapidated, and it was only by patching them up that they could be used this year. To make them available for another season, they will have to be partly re-constructed ; and an estimate of the cost of the work will be submitted forthwith.

It was not until the end of May that square timber and saw logs arrived at this city in any considerable quantities, but since that time the " running" has been steady, and it may now be said that the Ottawa and its main tributaries are dotted with the products of the forests.

The regulations already referred to, for the protection of the provincial slides and booms, have been productive of much good on the Ottawa, but if those in charge of rafts and drives of saw logs would only abide by the law as established by Order in Council, the damage and delay resulting from the reckless driving of large quantities of timber would be of rare occurrence, while the river improvements would be much less liable to be damaged in consequence thereof.

I am indebted to A. J. Russell, Esquire, Collector of Slide dues, for the following statistics as to the amount of business done at the Government Works on the Ottawa and its tributaries in 1866 :—

" Number of rafts square timber.......................... 124
" Number of cribs square timber.......................... 11,638
" Number of saw logs..............................pieces 684,585

" Revenue accrued or amount charged for above $56,798.38. Say fifty six thousand " seven hundred and ninety eight dollars and thirty eight cents."

In submitting the above.

I have the honor to be,

Sir,

Your most obedient servant,

HORACE MERRILL,

Superintendent, Ottawa River Works.

APPENDIX No. 41.

(No. 341.)

REPORT BY G. W. RANNEY, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE RIVER TRENT AND ITS TRIBUTARIES, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

F. Braun, Esq., Belleville, 19th July, 1867.
Secretary, Public Works Dept., Ottawa.

Sir,—I have the honor, in compliance with the instructions contained in No. 62,924, dated 15th of June, to report to the Department the state, and cost of repairs, and additions to the works of the Inland Navigation of the Newcastle (or Trent) District, under my charge, for the past fiscal year ending 30th June, 1867.

WIDOW HARRIS'.

The dam is in good order, and has had no repairs for the past year.

CHISHOLM'S RAPIDS.

The slide and booms are in good working order. The dam should be made more staunch, by gravelling it for its preservation; waste weirs should be made, to waste the surplus water in the spring, to keep the water at a more uniform level. The Canal and lock are not in use, therefore no repairs were required.

Application has been made to build a fish slide in the dam; salmon migrate in the river, and the dam obstructs the way.

The following works, next in order, are managed by a Committee in the lumbering trade, and maintained by the tolls levied on lumber passing down the river:—

Ranney Falls.—Slides, dam and guide booms.
Campbellford.—Guide booms.
Fiddler's Island.—Wing dams.
Middle Falls.—Slides, dams and wing dams, and guide booms.
Crow Bay.—Retaining boom.
Heely Falls.—Dam, slides, and guide booms.

These works are in good working order. A considerable amount of repairs have to be done to them yearly to replace the decayed parts. No changes have been made for several years.

At Heely Falls, the still-water navigation commences. It is the lower end of the lower reach of still-water navigation on the line. The dam was not staunch, and allowed the water to decline below the level of intended navigable height. $400 was appropriated and expended in gravelling it; but the sum was insufficient to complete it satisfactorily. It would require $400 more. The navigation between Heely Falls and Crooks' Rapids is impeded by a ridge of boulders on flat rock bed, at Stewart's Island, about a mile below Crooks' Lock. The same difficulty exists between Crooks' Lock and the foot of Rice Lake. The steamers now engaged drawing ore from the Marmora works have been fast on these rocks. A sum of $700 has been appropriated for the removal of the boulders, and the work will be commenced as soon as the water gets low enough.

CROOKS' RAPIDS.

The works have been and are now under a state of repair and improvements for the the accommodation of the newly existing traffic,—that of the transportation of Marmora ore. The lock gates have been renewed; the guard walls repaired; frame guards built for guidance and protection of steamers along the banks; a new swing bridge over lock, and other necessary conveniences for the well working of the station, which have cost $3,730. There are still further improvements and repairs necessary.

Although these works have been a long time in existence, they were never worked, and, in a manner, not perfected, causing now more than ordinary putting to rights. Portions have gone to decay, that have now to be renewed. The lock-house is untenantable, and requires repairs; there is a strong leak under the lower mitre sill that requires to be staunched; an engine-house built for the engine that was used to pump the lock.

As before stated, there exists the difficulty of an intricate channel between the boulders from the works to Rice Lake. The navigation to Whitlas from Rice Lake is good.

WHITLAS RAPIDS.

The works are not in use for still-water navigation, and entirely out of repair.

LITTLE LAKE.

The booms and piers are in good order.

BUCKHORN.

The works are in good order. An order for two new boom piers to be built has been given, and will be put in soon: will cost about $100. Of late, the boom has been carried. away by lumbermen, which will have to be replaced or paid for by the parties.

At this station, is another division between the lumber navigation and the still water navigation. The dam here maintains the level of Buckhorn, Chemong, and Pigeon Lakes, and sets the water back to the lock at Bobcaygean, a large sheet of water. In seasons of low water, a division of the channel between the steamboat navigation and the lumberers is a matter of contention.

BOBCAYGEAN.

The dams and slides are in good order.

The lock gates do not work well; one of the wicket gates is broken, in the north upper gate, which involves the necessity of raising the gate above water, or pumping the lock to repair it. The leak caused by that defect makes the lower gates work hard.

The water in the river being too high during the whole of last winter to undertake to raise the gates above it, is why it was not repaired last winter. I believe it will be advisable to pump the lock chamber next winter to clean it out, and put all the gates in order. The swing bridge over the Canal is worn out and should be repaired immediately, fearing it may drop into the Canal. Preparations are being made to repair it.

There are four steamers that ply through this lock daily.

The navigation to Lindsay from Bobcaygean is good, except through the cuts on the Scugog River.

Piles and booms should be placed along the sides to guard off the stumps and trees The direction is bad and the width narrow.

LINDSAY.

The works are in good order. The slide is not very much used. A fish slide has been asked for at this station. A good deal of difficulty exists in keeping the level of the water above the dam uniform; conflicting interests are hard to satisfy, and it is rather difficult at all seasons to meet the exactness required by the different parties.

The navigation from Lindsay to Lake Scugog could be improved a good deal, by removing trees and stumps from off the points and sharp turns, giving a greater width of river which is required in many places. The navigation has been very much impeded by Township Bridges across the river, with no provision made to pass them. They have been removed of late. At the foot of Scugog Lake the deepest channel is very crooked, eight buoys to mark the channel would be a very great improvement.

All of which are respectfully submitted.

I have the honor to be, Sir,
Your obedient servant,
G. W. RANNEY,
Superintendent, Trent Works.

APPENDIX No. 42.

(No. 382.)

REPORT BY JOSEPH ROSA, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE METAPEDIAC AND RISTIGOUCHE ROADS, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

F. BRAUN, Esq., St. FLAVIE, 24th July, 1867
Secretary, Public Works Dept., Ottawa.

Sir,—In accordance with the instructions contained in your letter No. 62,933, dated 15th June, ult., I have the honor to submit to you herewith the Annual Report respecting the Works in my charge, for the fiscal year, or from the 30th May, 1866, to the 30th June, 1867.

METAPEDIAC ROAD.

This road could not be completed last autumn, as it should have been, for various reasons, the two principal of which are, the almost incessant rains which fell in the months of August and September, and the early frosts in the autumn.

In the month of July last Mr Dionne was sent by the Department to protest the contractors who had abandoned their sections. Accordingly they, as well as their securities, were protested; but this step did not produce the effect the Government expected from it, as the contractors did not resume the work.

In August last, G. F. Baillairgé, C.E., was sent along the road to take steps, in concert with the undersigned, to secure its completion in the autumn. In consequence, the sections which had been abandoned were, with the exception of two, given out to new contractors, who bound themselves to complete them by the month of September; day-laborers were set to work on the sections on which the work was not pushed forward with sufficient activity by the contractors, but as has been already stated, the rain in the months of August and September, &c., paralyzed these efforts, and on several of the sections it was found to be impossible to complete the work.

The whole of the contract work was completed on the 5th instant, except on sections 11, 38 and 70, in the centre division, having a total length of twenty-two arpents.

Work has been done on these three sections to the amount remaining due upon each of them, but as the contracts for these sections had been taken at too low a price, and the work, on Section 11. principally, having been badly done by the contractor, the balance remaining due was insufficient to complete the sections; I have, however, been able to make them passable. A fresh grant will be required to complete these sections, and to make the necessary repairs to the part made previous to the year 1862.

Since the 31st May, 1866, the date of the Annual Report. the most indispensable repairs were made in the months of August and September, 1866, upon the whole of that portion of the road which was constructed between the years 1857 and 1861 inclusive.

The work done on the southern division comprises the repairing or rebuilding of seven pieces of causeway, the repairing of two large bridges, and the reconstruction of another small bridge which had been carried away by the flood, the renewing of three culverts and the repairing of three others. The fireweeds and shoots which were growing along the sides of the road and in the ditches have been mown down or pulled up, and the ruts have been filled up.

In August, 1866, a contract was entered into for the making and placing of 1,400 feet of guard-railing, and the setting of posts six feet from each other along an extent of 2,300 feet, upon the most dangerous parts of this division; but the latter work is not yet finished.

In the northern division, a causeway has been raised, two culverts have been constructed and several others repaired, some ditches have been cleaned out, the weeds have been mown down, the shoots pulled up, and the ruts filled.

Timothy and clover seed have been sown upon all parts of the road where it had not previously been done.

The paint on the large bridge over the River Métis, and on that over the River Assametquagan, having been been partially washed off by the rain, the tarring and sanding of that over the River Métis was commenced last autumn, and one coat only was laid on.

I was unable this spring to have the second coat applied to the Métis bridge, or to have the painting of that over the Assametquagan begun, the balance of the appropriation being insufficient to allow of its being done without entailing neglect of other repairs which were equally indispensable.

Signs have been set up at each extremity of the road and half way between them. These stand 20 feet above the road. Those at the extremities shew the distance from St. Flavie to Cross Point, and from Quebec to Halifax, and *vice versa*, in French on one side and in English on the other.

Mile-posts have also been set up along the road from St. Flavie to Cross Point. On these the distance to Cross Point is marked on one side, and to St. Flavie on the other. They are 5½ feet in length, 2½ of which are under ground and 3 above. The 3 feet above ground are 6 inches square.

The thaw and rain in the spring this year again caused land slides in the southern division to fall from the upper part of the mountains upon the road and obstruct it. These slides will inevitably recur annually for some years to come.

The unusual floods, in May and June last, in the Metapediac and Ristigouche Rivers also caused damage to the causeways, on which a large portion of the road in the southern division is constructed, and chiefly in the part made previous to 1862.

In June last, damage was also caused by fire: a bridge 89 feet long and 16 feet high, and two culverts were destroyed, and several pieces of causeway were injured.

The repair of all this damage has been estimated at $3,000.

The greater part of the damage is at present in course of repair.

After the opening of the Kempt Road, as in about 75 or 80 miles there was not a single house, the Government accorded to four several persons the sum of $100 yearly ($400 in all) to induce them to reside on it and to assist travellers.

Now that colonization is taking the direction of the Metapediac Road this sum of $400 might be applied to the repairs of that road in both summer and winter.

When that road shall have been completed and put in good repair, this sum would, if judiciously expended, suffice to keep it in good order. I should propose to expend this sum for the benefit of the road in the following manner: I would give $60 per annum to a person who should reside at the place called "the Rock of Louis Lachance," on the south section, on condition that he should keep open during the winter 4 miles on each side of the Rock, 8 miles in all. His duty should consist in levelling and clearing the road of the avalanches which, falling from the hills, encumber and obstruct the road below; besides which he should keep a good house to shelter travellers. The remainder, $340, might be assigned to another person, whose duty it should be to pass two or three times in the year along the road, with two men and a carriage, from Ste. Flavie to Pointe à la Croix, in the months of June and September: in June to clear the road of land-slides, stumps, trees, rocks, &c., in short of all impediments to travel, to scour the ditches, and generally to repair damages; in September to fill in with good gravel the ruts and wheel tracks made during the summer, besides executing all other ordinary repairs.

If a bridge or a piece of brush-work require to be renewed, having been destroyed by fire or washed away, such repair should be accounted extra work, and no part of the duty of the overseer.

If the Department should adopt the above method of keeping the road in a good state of repair, it would further be needful to have the road inspected twice in the year by one of its own officers—once in July, and once in October—in order to ascertain its good condition and the proper performance of the duty before making the payments appointed.

I regret that it is not in my power to recommend any of the persons at present employed to make the above repairs.

METAPEDIAC ROAD.

A Table shewing the Balance arising from the several appropriations to 31st May, 1866, the amount expended from 1st June, 1866, to 30th June, 1867, and the Balance in hand on 1st July, 1867.

	$ cts.	$ cts.	$ cts.
Balance of appropriations in hand on 1st June, 1866	......	19,512 32	
Amount authorized by No. 59,182, addressed to G. F. Baillairgé, Esq	......	8,458 66	
			27,970 98
Amount paid to Contractors on their several contracts:—			
Northern Division	3,170 68		
Middle do	15,467 10		
Southern do	1,207 84		
		19,845 62	
Amount paid for day labor on deserted Lots:—			
Northern Division	376 46		
Middle do	385 94		
		762 40	
Amount paid for repairs:—			
Northern Division	880 33		
Middle do	186 50		
Southern do	2,415 79		
		3,482 62	
Paid to G. F. Baillairgé, for Salary, &c	492 63		
Superintendence and Contingent Expenses	3,057 58		
		3,550 21	
			27,640 85
Balance	......	......	330 13
Amount appropriated for the repair of damages caused by water and fire in May and June last, by No. 63,048, dated 27th June, 1867	......	......	2,500 00
Total of Balance in hand	......	......	$ 2,830 13

RISTIGOUCHE ROAD.

Since 30th May, 1866, three small bridges have been built. The bridge over the mouth of the Little River has been given out on contract, as also that over Hugh Fraser's mill-stream, which had been given up by the former contractor. It is now finished except the tarring. It is now built on two abutments and one pier of rough cedar, but the upper frame or timber work is of dressed pine. It is 143 feet long, 27 feet high, and 18 feet wide. It has two openings or water-ways, one 50 feet wide, the other 19.

According to the original plan prepared for this bridge, the string-pieces, five in number, stretching over the large or main opening, were to be strengthened by struts below; but with the consent of the contractor and the approbation of the Department, those struts were got rid of, and instead of them trusses were substituted, the braces of which were secured to the outer stringers and to the king-post beneath, by means of wrought-iron bands. The road-way, which is of hewn cedar, is provided with side rails or guards, 16 feet apart. That over the Little River is made of rough cedar, to be covered with gravel, except the openings above the two branches of the river, one of 45 feet and the other of 70 feet, which will be laid with hewn cedar. The outer string-pieces, over the large opening, will be strengthened by means of braces and girders which will be tied to the bearers beneath by wrought-iron bands.

This bridge will be 1,853 feet in length, 18 feet wide, and from 6 to 19 feet in height. A ide guard will be placed on each side of the roadway.

About one-third of the work is already completed.

According to the terms of the contract this last-mentioned bridge was to have been finished by 30th June last, but in consequence of the difficulty of obtaining necessary materials, of the lateness of the Spring, and of the height of the water in all the rivers, the timber required for its construction could not be drawn to the place till the 10th or 15th June last.

Ten or twelve piers or cribs, filled with stone, which had been prepared last autumn, were necessarily taken down this spring in order to be rebuilt on a better foundation. The frost and the height of the water were a cause of delaying the foundation of the piers till the middle of June last.

Every spring, and occasionally in autumn, several miles of this road are inundated by the high tides and the rising of the rivers, and are submerged to the depth of 2 to 6 feet, the flood continuing sometimes several days. For a whole fortnight last spring, the mail-carrier was obliged to carry the mail-bags on his back over the fields a distance of four or five miles, there being too much water and ice on the road to allow him to pass over it even on wheels.

Although some alterations and repairs are indispensable, the bridges over the Little River and over the Hugh Fraser's Creek are the only works which are practicable at present, inasmuch as the balance of the appropriations on hand is barely sufficient for those two works.

Referring to letter No. 59,182, dated 28th July, 1866, and addressed to G. F. Baillairgé, Esq., we find the

Balance on hand was	$5,696.15
The amount paid out in the fiscal year 1866-7 was	2,687.83
Balance in hand 30th June, 1867	$3,008.32

The whole humbly submitted.

I have the honor to be,
Sir,
Your obedient servant,

(Signed,) JOSEPH ROSA,
Superintendent.

APPENDIX No. 43.

(No 1,171.)

REPORT BY P. GAUVREAU, SUPERINTENDENT.

DESCRIBING THE WORKS AND REPAIRS EXECUTED ON THE PUBLIC BUILDINGS, &c., UNDER HIS CHARGE, DURING THE FISCAL YEAR ENDING 30TH JUNE, 1867.

Public Works Department,
Quebec, 7th October, 1867.

F. Braun, Esquire,
Secretary, Public Works Dept., Ottawa.

Sir,—In pursuance of the instructions contained in your letter No. 62,930, of 15th June last, I have the honor to submit to you the following Report on the various works and repairs done under my superintendence during the year ending 30th June last.

PIERS.

BERTHIER.

During the year ending 30th June, 1867, repairs of some importance have been effected to this pier. Messrs. Trepanier and Simard were the contractors. The amount of their contract was $1,400, and they performed extra work to the amount of $360. The total amount of the repairs effected to this pier is $1,760.

RIVIÈRE DU LOUP.

The repairs to this pier, which had been commenced in the spring of 1866, by Mr. John Nesbitt, Contractor, were nearly completed in the fall. All that remains to be done is to insert a few bolts, and this can be done when the tide falls sufficiently. The amount of the contract was $3,550, and additional work has been done to the extent of $311.82. The total amount expended for repairs is $3,861.82, out of which a sum of $50 has been retained for the inserting of the bolts, which could not be inserted but at low tide.

The repairs effected to this pier consist chiefly of a sheathing of elm, with plates of iron at the joints, to prevent it from being worn by the ice; and I am gratified to state that the test of the first winter has been most satisfactory, and has perfectly confirmed the opinion I had formed as to the solidity and durability of such a sheathing.

I am not aware that repairs have been effected on any of the other piers this year.

PIERS AND LIGHTHOUSES.

POINTE ST. LAURENT.

The pier, supporting a lighthouse, which was constructed in 1866, having suffered great pressure from the shore ice, and having lost its natural position, it was found necessary to expend $667.75 last autumn to take down the part above the water-line and place the materials in safety on the shore.

LIGHTHOUSES.

No repairs have been effected to the lighthouses under my superintendence this year.

JAILS.

NEW JAIL AT QUEBEC.

Various works which remained to be done on the constructed portion of this building, in order to complete it and to enable the prisoners to be transferred, have been effected this year. Several changes and improvements, necessitated by the classification of the prisoners, have also been made. These various works have cost $5,436.67.

A workman, assisted by the prisoners, is now employed in pointing the courses of the outer walls with a mixture of white-lead and sand. For this work there remains a balance, $993.98, out of the total sum of $6,430.65, which I am authorized to expend for improvements and alterations.

NEW JAIL AT SHERBROOKE.

The part of this building which had been begun (the right wing and centre) has been nearly finished this year, and the little work remaining to be done will be finished before the autumn.

The amount of the estimates of this year, for works under control, is $15,737. A sum of $340 has been paid for locks for the cells.

LOWER CANADA REFORMATORY PRISON.

The wing which had been commenced at the date of my report of the 4th June 1866, has been finished, and the main building and the wing which is to connect it with the portion already built, have been begun and are in course of construction. The works are being vigorously pushed forward, and I think the whole of the part which has been begun, will be covered in before the end of the autumn.

A sum of $40,214.58 has been expended this year for the reconstruction of this building.

COURT HOUSES AND JAILS IN NEW DISTRICTS.

MALBAIE.

A pier has been constructed in front of this building in order to prevent land-slides and to protect the base of the walls. Mr. George Levêque undertook and has performed this work for the sum of $770. He has also boarded the fence enclosing the grounds, and this work has cost $150.

BEAUCE.

This building is in a most dilapidated condition, and the walls shew signs of falling to ruin. No repairs have been made this year.

SOREL.

Repairs to the extent of from $100 to $130 will be effected to the roof of this building, in accordance with the instructions I have received.

INDUSTRIE.

Repairs to the amount of $100 will be effected, in pursuance of your orders, to the drains and lead-pipes, which are defective.

STE. SCHOLASTIQUE.

The settlement of the accounts of the contractor, Mr. Robert H. McGreevy, for the reconstruction of this building, has been effected this year. He has been paid for

Work under contract...	$13,250 00
For taking down and rebuilding a wall	850 00
	14,100 00
For other additional work	541 00
	$14,641 00

ALGOMA.

During this year I have had to furnish plans for the construction of this building, but I do not know whether it is far advanced. A sum of $155.20 has been paid for the locks of the cells.

MAGDALEN ISLANDS.

Extensive repairs have been effected to this building. They have cost $2,569.90½. A balance of $430.09½ remains out of the amount I am authorized to expend, and this sum will more than suffice to cover the little work remaining to be done.

QUEBEC COURT HOUSE.

A sum of $32.75 has been paid for carpets laid in the High Constable's rooms.

CUSTOM HOUSES.

DUNDEE.

The work commenced last year and abandoned in consequence of the bad weather has been resumed and completed this year. A sum of $430.55 has been expended for these works.

NEW CUSTOM HOUSE, QUEBEC.

The repairing of this building has been finished. Other works of little importance have also been carried out during the year, and the following sums have been paid:—

To S. & C. Peters, on contract	$1,539	80
" Thomas McKenna	2,035	95
For iron collars on roof	111	46
" Repairs not included in contract	1,853	65
" Various other works	699	83
" Coloring walls	292	00
	$6,532	69

OLD CUSTOM HOUSE, QUEBEC.

A sum of $14.87 has been expended in altering doors and a partition in this building

PUBLIC BUILDINGS, QUEBEC.

PARLIAMENT HOUSE.

Extensive repairs must be effected in order to render this building fit for occupation by the Local Houses.

POST OFFICE.

In order to repair this building and make the requisite alterations, so as to afford greater accommodation to the public, I was authorized to expend a sum of $3,650; but as I subsequently received counter orders, no work has been commenced.

CHATEAU ST. LOUIS.

The works requiring to be done in order to alter this building so as to adapt it for the purposes of the Normal School, have been finished.

DURHAM TERRACE.

The walls supporting the platform, in rear of the old Chateau St. Louis, were exceedingly dilapidated and in a dangerous state. It has been found necessary to repair them, and I have been authorized to expend $200 for that purpose.

THE SEWELL PROPERTY.

This building has been repaired and the rooms furnished as offices for His Excellency the Governor General. The work done and rent of furniture have cost the sum of $1,742.43.

Repairs to the roof and the painting of the Militia offices, in this building, have cost $83.50.

DRILL SHED.

A sum of $535.33 has been paid for foot-ways and fencing, and providing lattices for the windows.

MARINE HOSPITAL.

The works which had been commenced at the date of my report of the 4th June, 1866, have been finished this year. The amount of the accounts paid for these works is $2,611.28⅔. There still remains to be paid the account of Mr. John Pye, plumber, which will amount to from $1,500 to $1,600.

SPENCER WOOD.

The usual work for the maintenance of this building, is the only work which has been done this year.

RIVER POLICE STATION.

I was authorized to make repairs to this building to the extent of $300, but having ascertained before causing the work to be undertaken that the foundations are giving way, and that the building is not of sufficient value to justify such costly repairs, no work has been commenced.

QUARANTINE STATION AT GROSSE-ILE.

The works which had been begun at the date of my report of the 4th June, 1866, have been pushed forward with vigor; but in consequence of the frequent prevalence of strong winds during the summer and fall of 1866, the pier remained unfinished. Work was resumed in the spring at this pier, and it will soon be finished. Two kitchens and two wash-houses are also in course of construction this year. The sum of $3,127.65 has been expended for the various works done this year.

I have the honor to be, Sir,
Your most obedient servant,

(Signed,) P. GAUVREAU.

APPENDIX No. 44.

PROVINCE OF CANADA, for Provincial Steamers, in account current with the Department of Public Works.

1866.	Dr.	$ cts.	1866.	Cr.	$ cts.
July 1..	To stock of coals on hand at this date, and outstanding debts...	5,647 32	July 1..	By Balance at credit of steamers	68,568 48
			Aug. 30..	By appropriation 29 and 30 Vic., ch. 8	75,000 00
1867.			1867.		
June 30..	To amount expended for running expenses, outfit and repairs, from 1st July, 1866, to date..	79,336 05	April 30.	By appropriation by Order in Council..............................	5,290 00
	To amount expended fitting out "La Canadienne"...............	953 95	June 30..	By Revenue collected and transmitted to the Hon. Receiver General, from 1st July, 1866, to date	33,766 13
	To Balance	102,312 70	do ..	By stock of coals on hand at this date, and outstanding debts...	5,625 41
		188,250 02			188,250 02
			1867.		
			June 30..	By Balance..............................	102,312 70

J. BAINE,
Book-keeper.

DEPARTMENT OF PUBLIC WORKS,
July, 1867.

APPENDIX No. 45.

STATEMENT of Awards made by the Official Arbitrators and Claims still pending before them for the year commencing 1st July, 1866, and ending 30th June, 1867.

NAMES OF CLAIMANTS.	SUBJECT OF CLAIM.	When referred.	Amount claimed.	Amount awarded.	With or without costs.	Date of award.
Claims settled.		1867.	$ cts.	$ cts.		1867.
Craig & Vallière	Removal to Ottawa	February 13	12,000 00	2,687 59	With	March 13
Alexander W. Powell	Gatineau Bridge	" "	648 29	157 10	With	April 1
Claims still pending.		1863.				
Charles Peters	Court House and Jail, St. Hyacinthe	February 20	13,473 00	......	......	......
Ira Gould	Water Power and Land, Lachine Canal	April 20	33,962 00	......	......	......
		1866.				
M. W. Baby	House Rent, Quebec	July 6	......	......	......	......

OTTAWA, 30th June, 1867.

F. H. ENNIS,
Secretary.

MISCELLANEOUS STATEMENTS.

APPENDIX No. 46.

No. 1.—LACHINE CANAL.—Depth of Water on Lower Mitre Sill of Lock No. 1—(from Lockmaster's Returns).

MONTH.	1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft- in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	35 3	25 7	37 9	31 6	31 9	27 7	39 6	27 0	34 6	29 3	38 3	24 0	36 5	30 6
February	....	....	33 3	31 7	32 10	29 3	27 4	25 0	30 11	20 9	31 3	28 9	33 2	30 0	30 10	28 0
March	....	....	32 2	31 3	32 0	29 10	27 4	24 9	29 6	26 3	30 7	28 8	32 0	29 6	36 5	28 0
April	....	....	32 2	22 2	32 0	25 0	34 6	24 7	36 9	21 0	32 6	21 0	36 6	22 2	29 7	21 9
May	....	....	25 0	22 7	27 0	23 2	24 7	22 4	22 0	20 2	25 5	20 5	23 7	22 4	24 6	22 2
June	....	....	24 0	21 3	23 8	20 7	23 0	21 0	20 0	19 1	23 10	33 0	23 10	21 9	23 9	21 11
July	....	....	21 3	19 0	20 8	18 10	21 2	18 11	19 3	18 10	22 9	21 0	25 5	20 7	22 0	20 4
August	....	....	19 0	18 7	18 10	17 5	19 1	18 0	19 0	18 0	21 5	20 6	20 11	19 7	20 4	19 3
September	18 7	18 0	19 4	18 1	17 8	17 1	18 2	17 9	18 5	17 9	20 6	19 6	21 5	20 0	19 6	18 10
October	19 0	18 2	19 5	18 7	17 6	17 1	19 7	18 0	18 10	17 7	20 5	19 2	21 2	19 4	19 6	18 7
November	19 10	18 5	20 0	18 9	18 3	17 1	22 6	18 7	17 10	17 0	21 7	19 7	20 2	18 9	22 2	18 3
December	24 3	19 3	30 8	18 4	30 3	17 11	25 7	19 0	34 10	17 1	23 1	19 10	33 6	18 2	35 11	20 3

No. 1.—LACHINE CANAL, &c.—*Continued.*

MONTH.	1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	34 3	30 2	36 4	31 4	36 6	27 5	32 7	23 1	37 0	31 9	36 10	24 5	32 5	27 8	37 8	29 3
February	29 11	27 0	31 5	28 9	32 8	30 1	31 10	28 4	32 7	29 9	32 7	29 6	28 8	25 7	33 0	31 7
March	29 6	28 2	32 4	29 10	31 8	30 6	29 4	27 7	30 3	28 8	33 5	29 0	27 9	26 5	31 10	30 5
April	28 7	20 6	41 7	24 3	35 5	25 2	36 9	25 3	32 6	21 5	40 9	22 9	33 2	22 8	33 0	24 0
May	23 9	20 7	27 2	25 5	26 4	23 0	24 7	22 0	26 4	24 0	24 7	23 3	23 9	21 3	26 5	24 7
June	22 4	20 4	25 9	21 7	22 10	20 4	22 5	20 1	23 11	19 10	23 3	19 11	22 10	20 11	25 6	21 10
July	20 4	18 10	23 3	20 7	20 4	19 5	20 1	19 3	19 11	18 6	20 5	19 10	20 9	19 0	....	....
August	19 3	18 7	20 8	19 4	19 9	18 9	19 6	18 4	18 7	18 2	19 9	18 4	19 3	18 5	....	....
September	19 1	18 0	19 9	18 9	20 2	18 8	18 6	18 0	18 6	17 7	18 3	17 3	20 8	18 7	....	....
October	19 0	10 5	20 10	19 10	19 8	18 9	18 6	17 10	19 7	18 1	17 4	16 4	19 10	17 10	....	....
November	20 0	18 10	21 3	20 0	20 2	18 10	20 2	18 0	20 6	18 10	17 6	16 4	22 2	18 6	....	....
December	32 7	18 11	26 5	20 0	28 2	18 8	32 0	18 9	25 9	20 4	28 2	16 8	25 6	21 5	....	....

APPENDIX No. 46.—*Continued.*

No. 1.—*Continued.*—LACHINE CANAL.—DEPTH of Water on Upper Mitre Sill, Lock No. 5—(from Lockmaster's Returns).

MONTH.	1849.		1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	11 10	10 4	11 0	9 5	11 4	10 0	13 1	11 3	11 10	10 0	11 11	10 2	12 0	10 7	12 5	10 2	13 2	10 10
February	....	....	11 1	10 2	11 1	9 9	10 6	9 3	12 4	10 7	11 0	9 6	11 1	9 2	10 6	8 8	11 9	10 7	13 2	11 5
March	....	....	10 8	10 0	12 0	10 3	9 3	10 11	11 1	10 3	11 8	9 9	9 7	8 9	10 2	9 3	11 2	10 2	12 7	10 10
April	....	....	11 6	10 0	13 5	12 4	13 11	10 5	13 8	11 2	12 5	11 0	13 6	9 0	12 5	9 4	13 0	10 6	14 1	12 6
May	14 3	12 7	15 4	13 2	14 3	13 4	14 10	13 8	14 8	13 5	14 9	13 6	13 8	12 6	12 7	12 1	14 10	12 8	14 1	13 5
June	14 2	11 7	13 3	11 1	14 11	13 2	13 9	12 11	14 4	12 10	14 1	12 3	12 10	11 11	11 9	11 4	14 5	13 7	14 5	13 0
July	11 5	10 6	11 1	10 8	12 4	11 6	....	....	12 10	11 6	12 3	11 2	12 5	11 1	11 7	11 1	13 7	12 10	13 7	12 4
August	10 4	10 0	10 8	10 0	11 6	10 6	....	....	11 5	11 1	11 2	10 4	11 2	10 6	11 0	10 6	13 0	12 0	13 0	12 0
September	10 5	9 10½	10 3	9 8	10 7	9 11	11 2	10 7	11 6	10 9	10 5	10 0	10 8	10 4	10 9	10 3	12 5	11 9	12 9	12 0
October	10 2½	9 10	10 5	9 10	10 4	9 11	11 0	10 8	11 8	11 2	10 3	9 11	11 3	10 3	11 0	10 4	12 0	11 4	12 4	11 10
November	10 10	9 10	10 5	9 9	10 5	9 8	11 8	11 3	11 11	11 0	10 9	9 10	11 11	11 0	10 6	10 1	13 0	11 4	13 3	11 3
December	11 4	10 1	11 2	9 11	11 9	9 10	11 8	10 10	11 4	10 3	11 7	9 9	11 6	10 10	11 4	9 9	12 4	11 10	11 6	10 2

No. 1.—LACHINE CANAL, &c.—*Continued.*

MONTH.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	12 7	10 6	12 5	10 10	12 1	9 4	12 8	10 10	11 7	9 10	12 0	9 10	12 4	10 1	11 0	8 9	12 11	11 3
February	11 7	10 1	12 0	10 8	10 11	8 5	12 8	11 11	11 8	10 5	10 8	9 8	10 5	9 2	10 4	8 1	12 4	10 7
March	13 5	10 11	12 0	10 1	12 2	10 8	12 2	11 9	11 4	10 4	11 6	10 5	13 1	9 8	10 2	9 5	11 7	10 10
April	13 9	12 8	12 8	11 8	15 0	11 8	16 4	11 4	14 8	11 0	14 9	10 7	14 4	13 3	14 5	9 11	14 5	11 3
May	14 11	13 9	14 4	12 4	16 4	15 6	16 0	14 0	14 7	13 2	16 2	14 9	14 8	13 11	13 10	12 1	15 8	14 7
June	14 6	13 6	13 5	12 2	15 8	13 2	14 0	12 5	13 4	12 1	14 7	12 1	13 10	12 0	13 4	12 2	15 6	13 6
July	13 6	12 4	12 1	11 3	13 4	12 4	12 4	11 9	12 1	11 7	12 1	11 3	12 3	11 9	12 3	11 3	....	....
August	12 0	11 6	11 6	11 0	12 8	11 4	12 0	11 5	11 9	10 11	11 4	10 9	11 9	10 10	11 5	10 9	....	....
September	11 7	11 3	11 4	10 9	11 10	11 4	11 10	11 3	11 0	10 9	10 11	10 4	10 10	10 2	12 0	10 9	....	....
October	11 8	11 0	11 3	10 10	12 7	12 1	11 8	11 1	11 0	10 9	11 6	10 6	10 4	9 4	11 10	10 6	....	....
November	12 9	10 10	12 7	11 1	12 10	12 0	11 9	11 1	12 3	10 10	12 4	10 11	10 0	9 6	12 7	10 9	....	....
December	12 9	10 10	12 11	10 10	12 10	11 7	12 2	10 1	12 2	10 11	12 10	11 4	10 9	9 6	13 4	11 5	....	....

APPENDIX No. 46.—*Continued.*

No. 2.—BEAUHARNOIS CANAL.—DEPTH of Water on Lower Mitre-Sill, Lock No. 6—(from Lockmaster's Returns).

MONTH.	1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	14 0	11 0	18 0	11 6	16 0	13 0	17 0	12 6	16 0	11 6	12 10	11 0	15 0	13 6
February	....	....	13 0	12 6	18 6	17 0	19 0	16 0	20 0	15 0	15 0	13 6	15 0	13 0	16 3	14 0
March	....	....	14 0	12 6	18 0	14 0	17 0	11 6	18 0	13 0	13 6	11 9	13 6	12 5	16 3	13 6
April	....	....	13 0	12 0	14 0	13 8	13 6	11 6	13 0	11 6	12 9	11 9	12 6	12 0	14 6	13 0
May	....	....	13 4	12 6	14 6	14 0	13 0	12 0	11 6	11 0	14 0	12 6	12 6	12 0	14 6	13 0
June	....	....	13 0	13 0	14 0	12 0	13 0	12 6	12 0	11 6	13 9	13 6	12 6	12 0	14 0	13 4
July	....	....	13 0	14 4	12 0	11 0	12 0	11 0	11 0	10 6	13 3	12 3	13 3	11 8	13 4	12 0
August	....	....	11 0	10 0	11 0	10 6	11 0	10 6	10 8	10 6	12 3	12 0	11 8	11 5	12 0	11 2
September	10 0	9 10	11 8	11 0	10 6	10 0	10 6	10 0	11 0	10 6	12 3	12 0	12 6	11 6	11 5	11 0
October	10 2	10 0	11 6	11 0	9 10	9 6	11 6	10 6	10 6	10 0	12 0	11 0	12 0	11 3	11 0	10 6
November	10 6	10 0	11 6	11 0	10 6	10 0	11 6	11 6	11 0	10 6	11 6	10 0	12 0	11 5	11 6	10 6
December	10 6	10 0	11 6	11 0	13 0	10 6	12 0	11 6	11 3	10 6	12 0	11 0	13 6	11 5	14 0	11 6

No. 2.—BEAUHARNOIS CANAL, &c.—*Continued.*

MONTH.	1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	17 0	14 0	16 6	13 9	14 2	12 4	11 6	10 8	15 0	10 10	17 0	13 6	17 0	10 4	16 0	13 10
February	16 3	15 0	19 6	15 0	16 2	14 2	14 0	11 6	19 0	13 0	16 0	13 6	17 8	15 0	16 0	14 4
March	15 0	11 6	16 0	13 6	16 2	12 0	12 6	12 0	15 0	11 6	13 6	13 2	14 6	12 4	14 0	12 0
April	13 0	12 0	16 0	14 6	16 11	12 0	13 10	12 0	14 2	11 6	13 8	13 2	13 6	12 4	13 0	12 0
May	13 0	12 0	16 0	14 6	16 0	13 3	13 0	12 6	15 3	14 2	13 11	13 6	13 6	12 0	14 10	13 0
June	12 10	12 0	15 3	13 0	13 3	12 5	12 6	11 11	14 5	12 0	13 6	12 2	12 6	12 0	14 10	13 6
July	12 0	11 4	13 0	12 4	12 5	11 6	11 11	11 6	12 10	12 0	12 2	11 6	12 2	11 6	....	....
August	11 4	11 0	12 4	11 5	11 6	11 2	11 8	11 4	12 10	11 8	11 6	10 8	11 6	10 6	....	....
September	11 9	11 4	11 8	11 0	11 9	11 5	11 6	10 4	11 8	10 5	10 8	9 10	11 10	10 0	....	....
October	11 9	11 2	12 3	11 8	11 5	11 0	10 6	10 2	11 0	10 5	9 10	9 2	10 11	10 8	....	....
November	11 7	11 2	12 5	11 6	11 3	11 0	11 3	10 5	11 7	11 0	9 6	9 2	12 7	10 8	....	....
December	13 9	11 7	12 4	11 6	11 4	10 8	11 10	11 3	13 6	11 7	10 4	9 4	13 0	12 7	....	....

APPENDIX No. 46.—*Continued.*

No. 2.—*Continued.*—BEAUHARNOIS CANAL.—Depth of Water on Upper Mitre Sill, Lock No. 14—(from Lockmaster's Returns).

Month.	1847.				1848.				1849.				1850.				1851.				1852.				1853.				1854.				1855.				1856.				1857.			
	Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January.	11	0	9	7	11	6	9	9	10	10	9	2	12	4	11	4	12	11	11	0	12	3	11	0	13	5	12	2	13	3	12	2	11	6	11	0	12	10	12	0	11	6	11	0
February	11	0	10	0	11	4	9	6	10	1	8	6	12	0	11	5	12	6	11	3	11	6	11	0	13	9	12	2	12	7	11	11	11	8	10	0	11	10	11	4	12	0	11	0
March.........	10	0	9	7	10	0	9	0	9	9	8	10	12	2	11	7	12	10	11	8	11	3	11	0	13	0	12	3	12	11	11	9	11	8	12	9	12	2	11	2	12	0	11	6
April...........	10	8	9	8	10	3	9	6	....		....		12	8	11	9	12	8	11	10	12	8	11	0	13	7	12	11	12	6	12	0	12	4	11	2	12	8	11	3	12	8	11	11
May	10	8	10	4	9	11	9	7	....		....		13	0	12	2	12	6	12	0	13	11	12	8	13	8	12	11	13	6	12	5	12	4	11	8	13	0	12	4	13	1	12	0
June	10	8	10	4	9	9	9	8	10	4	9	10	12	6	12	0	12	5	11	11	13	8	12	10	13	6	13	0	12	10	12	6	12	9	11	9	12	10	12	4	13	2	12	7
July	10	4	10	0	9	9	9	6	10	6	10	0	12	0	11	9	12	4	12	0	13	5	12	6	13	2	12	10	12	10	12	6	12	9	12	2	12	6	12	3	13	2	12	10
August.........	10	0	9	8	9	9	9	3	10	10	10	5	12	0	11	6	12	2	11	10	12	9	12	0	12	10	12	7	12	6	11	10	12	6	12	0	12	4	12	0	13	1	12	9
September ...	10	0	9	6	9	5	9	2	11	0	10	7	12	0	11	2	12	0	10	10	12	4	12	1½	12	10	12	4	12	2	11	9	12	4	12	0	12	3	11	10	13	0	12	8
October	10	0	9	7	9	2	8	8	11	4	10	4	12	0	11	2	11	8	11	6	12	3	11	10	13	4	12	3	12	1	11	6	12	4	12	0	12	0	11	5	13	0	12	4
November ...	10	0	9	7	9	3	8	9	11	6	10	11	11	6	10	10	11	9	11	4	12	3	11	9½	12	10	12	1	11	10	11	2	12	4	11	10	11	8	11	0	13	2	12	5
December.....	10	0	9	10	9	6	8	8	12	1	11	1	12	2	11	0	12	0	11	4	12	8	12	0	12	6	12	0	11	7	11	0	12	8	12	0	12	0	10	6	13	2	12	5

No. 2.—BEAUHARNOIS CANAL, &c.—*Continued.*

Month.	1858.				1859.				1860.				1861.				1862.				1863.				1864.				1865.				1866.				1867.			
	Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January........	14	3	12	7	13	7	12	5	14	0	12	4	13	6	12	2	13	10	12	6	12	11	12	1	12	8	11	4	13	0	12	1	12	4	11	5	13	10	12	7
February	13	8	12	11	13	2	12	2	12	10	12	2	13	2	11	6	13	3	12	8	13	0	12	0	12	8	11	10	12	10	11	8	12	9	10	8	13	0	12	4
March........	13	6	12	6	13	9	12	6	12	10	12	3	13	4	12	4	13	4	12	4	12	9	12	0	12	4	11	8	13	10	11	8	11	11	11	0	12	9	12	4
April.........	13	3	12	9	13	9	12	11	12	9	12	4	13	9	12	10	15	0	12	5	13	9	12	3	13	1	12	1	13	10	12	10	12	8	11	8	13	3	12	9
May	13	4	12	10	13	8	13	4	12	8	12	4	13	11	13	4	14	0	13	7	13	7	12	8	13	4	12	10	13	0	12	9	12	5	11	9	14	1	13	2
June	13	8	13	2	13	8	13	5	12	9	12	6	13	9	13	4	13	5	13	2	13	4	12	9	13	4	12	11	13	0	12	11	12	10	12	2	13	7	13	0
July	13	11	13	3	13	7	13	2	12	11	12	4	14	2	12	10	13	5	13	0	13	1	12	7	13	0	12	8	13	0	12	5	12	5	12	3	....		....	
August	13	7	13	2	13	5	12	11	12	10	12	6	13	5	12	11	13	3	12	11	13	7	12	6	12	8	12	4	12	7	12	0	12	8	12	3	....		....	
September	13	4	12	2	13	2	12	4	12	11	12	4	13	2	12	7	13	0	12	6	12	8	12	3	12	7	12	2	12	4	11	8	12	10	12	2	....		....	
October	13	2	12	5	13	3	12	0	12	8	12	1	13	4	12	8	12	8	12	4	12	4	11	11	12	5	12	2	12	2	11	3	12	5	11	11	....		....	
November	12	11	12	3	12	11	12	0	14	6	12	1	13	3	12	6	12	6	12	3	12	4	11	10	12	10	12	0	11	11	11	3	12	10	10	10	....		....	
December	13	6	12	1	13	8	12	2	14	0	12	4	13	3	12	9	12	7	12	0	12	4	12	0	13	5	12	4	12	3	11	5	13	0	12	3	....		....	

APPENDIX No. 46.—*Continued.*

No. 3.—CORNWALL CANAL.—Depth of Water on Lower Mitre Sill, Lock No. 15—(from Lockmaster's Returns).

MONTH.	1849.		1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	17 4	10 4½	19 6	14 10	28 0	13 9	25 3	11 3	21 9	11 0	24 0	10 6	26 0	13 0	27 0	13 6	15 6	11 3
February	....	....	18 9	11 8	14 8	9 0	24 0	20 3	20 0	12 3	21 0	15 0	23 0	17 3	22 0	17 0	26 5	20 0	....	....
March	....	....	14 5	10 1	17 2	11 0	24 0	12 0	18 6	12 4	22 7	16 3	19 6	14 3	24 0	16 3	18 10	13 0	....	....
April	....	....	10 8	10 2	11 5	10 2	13 2	11 0	12 4	11 7	16 0	10 6	17 3	10 6	16 6	11 1	12 9	11 11	12 0	11 8
May	10 0	9 8	11 2	10 0	10 8	10 4	11 7	11 5	12 3	11 11	12 0	11 3	10 11	10 2	11 4	11 0	11 4	11 2	12 2	11 9
June	9 10	9 7	11 0	10 5	11 0	10 8	12 2	11 5	12 10	12 0	11 6	11 4	10 7	10 4	11 2	11 0	11 5	11 2	12 6	11 9
July	9 10	9 8	10 7	10 4	11 0	10 10½	11 9	11 4	12 0	11 9	....	10 0	11 9	10 7	11 1	10 9	11 11	11 4	12 8	12 2
August	9 8	9 6	10 6	10 2	10 11	10 8	11 6	11 1	11 8	11 5½	11 6	10 9	11 3	11 0	10 9	10 6	11 10	11 9	13 3	11 9
September	9 7	9 3	10 5	9 7½	10 10	10 3	11 1	10 10	11 6	11 2	10 11	10 4	11 3	11 2	10 6	10 3	11 10	11 4	....	....
October	9 6	9 1	9 9	9 5	10 4	10 1	10 10	10 7	11 4	10 11	10 4	10 2	12 0	10 10	10 5	9 7	11 6	9 8	11 2½	10 3½
November	10 1	9 4	9 10	9 4	10 3	9 10	11 5	10 5	10 11	10 10	10 4	10 1	11 6	10 10	9 10	9 2	10 8	10 4	....	....
December	10 7½	9 5	19 0	9 9	17 3	9 10	11 4	10 6	11 9	10 6	17 8	10 0	15 5	11 0	16 6	9 2½	11 4	10 4	15 6	10 10

No. 3.—CORNWALL CANAL, &c.—*Continued.*

MONTH.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	29 9	15 7	28 0	18 2	26 6	11 2	24 0	11 0	14 7	10 5	26 1	13 0	23 6	12 2	26 9	11 0	26 0	15 0
February	29 0	20 0	34 0	19 0	33 0	23 9	25 6	20 0	27 9	12 6	25 6	20 9	25 6	17 0	27 0	18 6	24 0	19 0
March	30 3	12 3	22 6	10 10	25 0	15 0	25 0	17 0	23 3	14 11	19 2	14 0	20 0	13 6	27 0	17 2	26 0	16 0
April	12 3	11 5	11 2	10 10	14 6	11 8	16 0	12 6	14 9	11 9	11 8	10 10	12 8	11 2	16 2	10 3	15 10	11 8
May	....	....	11 2	10 10	12 4	11 11	12 10	12 4	12 0	11 8	11 10	11 3	11 9	11 2	10 9	10 4	12 7	11 10
June	12 2	12 0	11 4	11 1	12 5	12 1	12 4	11 9	11 9	11 7	11 10	11 6	11 5	11 1	11 4	10 6	12 2	11 9
July	12 4	12 0½	11 6	11 2½	12 10	12 1	12 0	11 10	11 5	11 5	11 7	11 3	11 5	11 0	11 1	10 8	....	....
August	12 3	11 6	11 6	11 2	12 2	11 8	12 1	11 5	11 6	11 1	11 4	11 1	11 1	10 6	11 2	10 8	....	....
September	11 8	11 2	11 4	10 10	11 11	11 3½	11 8	11 2	11 3	10 8	11 2	10 0	10 7	10 3	11 1	10 9	....	....
October	11 11	10 4	11 2	10 9	12 1	11 6	11 2	10 10	10 9	10 5	11 0	10 8	10 5	9 9	10 11	10 5	....	....
November	10 11	10 3	11 4	10 5	12 0	11 5	11 2	10 4	10 9	10 5	11 3	10 8	10 5	9 10	11 0	10 5	....	....
December	25 0	10 8	12 9	11 0	12 0	11 5	11 0	10 7	12 7	10 4	16 0	10 10	10 11	9 8	11 9	10 10	....	....

APPENDIX No. 46.—(*Continued*).

No. 3—*Continued.*—CORNWALL CANAL.—DEPTH of Water on Upper Mitre Sill, Lock No. 21—(from Lockmaster's Returns).

MONTH.	1849.		1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	9 6	8 2	10 4	5 1	10 4	8 2	10 11	9 11	11 0	9 1	9 7	8 4	10 7	7 0	9 3	3 0	12 0	11 0
February	....	....	91 1	9 1	9 11	6 0	9 2	8 5	10 11	9 11	9 11	8 11	8 11	7 4	9 2	3 0	10 1	3 0	....	....
March	....	....	10 0	9 2	10 3	9 5	9 11	8 5	10 11	9 11	10 11	9 2	8 11	8 1	9 5	9 0	9 10	9 0	....	....
April	....	....	10 10	9 5	10 7	9 6	11 8	10 0	11 7	10 5	10 6	9 9	10 1	9 1	10 7	9 0	10 7	9 6	11 8	11 0
May	10 6	9 9	10 10	10 0	10 10	10 0	11 0	9 6	12 2	11 2	11 3	10 3	10 4	9 2	11 3	10 3	11 3	10 1	12 0	11 4
June	10 7	10 2	10 8	10 1	11 0	10 5	12 0	11 1	12 1	11 9	11 5	10 6	10 9	10 0	11 10	11 0	11 8	10 10	12 6	11 11
July	10 5	10 0	10 6	10 0	10 11	10 6	12 0	11 0	12 0	11 5	11 4	10 3	11 0	10 4	11 2	10 1	11 10	11 2	12 6	11 10
August	10 1	9 7	10 3	9 9	11 0	10 0	11 4	10 7	11 5	10 10	11 1	10 0	11 0	10 2	10 10	10 2	11 10	11 3	12 8	12 1
September	10 0	9 2	10 1	9 1	10 5	9 6	11 1	10 5	11 1	10 3	10 8	9 5	10 11	10 2	10 6	9 11	....	....	11 10	11 2
October	9 7	8 6	9 8	8 11	10 6	9 5	10 8	9 5	11 8	10 2	10 9	9 9	10 10	10 1	10 7	9 4	11 7	9 4	12 0	11 0
November	10 2	9 0	9 7	8 0	9 11	9 1	10 9	9 10	10 7	10 1	10 6	9 3	10 10	9 10	10 3	9 1	12 0	10 8	....	....
December	10 1	8 11	9 11	8 7	10 4	8 5	10 6	9 11	10 10	9 10	9 10	8 5	11 10	9 10	10 11	9 1	11 11	10 11	11 8	10 0

No. 3.—CORNWALL CANAL, &c.—*Continued.*

MONTH.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest:	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	11 6	10 1	12 2	10 3	11 1	9 8	11 6	9 3	11 3	10 4	11 9	3 0	10 9	9 10	10 0	5 0	11 10	10 0
February	11 0	9 9	10 8	10 2	10 7	9 6	10 10	9 11	10 11	9 0	9 10	4 0	9 6	9 0	8 6	3 5	10 10	9 11
March	12 6	10 6	11 0	10 6	11 3	10 1	11 6	10 2	10 10	10 0	10 5	9 8	11 6	8 8	9 9	8 7	10 11	10 2
April	12 6	11 1	11 1	10 6	11 9	10 7	12 8	10 9	11 9	10 9	11 0	10 0	12 1	10 9	10 3	9 5	11 8	10 6
May	12 8	11 11	11 3	10 5	12 7	11 6	12 11	12 1	12 1	11 7	11 11	10 10	11 7	10 11	10 7	9 9	12 2	11 2
June	12 9	12 4	11 4	11 0	12 5	12 0	12 5	12 0	12 2	11 9	12 1	11 6	11 10	11 2	11 1	10 3	12 5	11 10
July	12 7	12 1	11 6	10 11	12 5	11 9	12 6	11 10	11 7	11 3	11 10	11 5	11 8	10 11	11 7	10 6	....	....
August	12 5	11 9	11 4	10 11	12 1	11 6	12 2	11 6	11 6	11 0	11 5	10 11	11 5	10 4	11 0	10 5	....	....
September	12 2	11 1	11 2	10 6	12 1	11 4	11 10	11 0	11 0	10 7	11 1	10 4	11 2	9 10	11 0	9 5	....	....
October	12 0	10 9	10 6	9 6	11 11	11 2	11 6	10 11	10 9	10 2	10 10	10 2	10 5	9 4	10 7	10 0	....	....
November	11 0	10 3	12 10	8 11	12 0	11 5	11 3	10 2	10 9	10 1	10 10	10 1	10 1	9 1	10 10	9 11	....	....
December	11 11	10 0	10 11	10 10	12 4	11 1	10 10	10 2	11 8	9 10	12 3	9 5	10 5	9 1	11 6	10 2	....	....

APPENDIX No. 46.—*Continued.*

No. 4.—FARRAN'S POINT CANAL.—Depth of Water on Lower Mitre Sill, Lock No. 22—(from Lockmaster's Returns).

Month.	1849.		1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	....	....	....	....	8 6	7 6	10 0	9 0	9 9	9 0	8 9	7 9	8 9	8 0	8 9	8 0	10 6	10 0
February	....	....	....	....	....	....	8 3	7 3	9 9	9 3	9 0	8 0	8 3	7 9	8 6	8 0	8 9	8 3	10 0	9 6
March	....	....	....	....	....	....	8 0	7 6	10 9	9 3	8 6	8 9	8 9	7 6	9 0	8 0	8 9	8 3	10 0	9 6
April	....	....	10 0	8 5	10 0	9 5	10 6	8 6	11 3	10 9	9 0	8 3	8 3	7 9	9 9	8 0	9 9	8 3	10 10	10 0
May	....	....	....	....	10 3	9 9	11 9	10 0	12 0	11 0	11 0	9 6	9 0	7 9	10 9	9 9	10 9	9 9	11 3	10 3
June	10 11	9 9	10 0	9 0	10 3	10 0	12 6	11 0	12 3	11 9	11 0	10 6	10 0	9 0	10 9	10 3	11 3	10 9	12 0	11 0
July	10 0	9 5	10 0	9 6	10 6	10 0	12 0	11 0	12 0	11 3	11 0	10 6	11 0	10 0	10 9	10 0	11 3	11 0	11 9	11 3
August	9 7	9 0	9 7	9 3	10 0	9 8	11 3	10 6	11 6	10 9	10 9	9 6	11 3	10 3	10 3	9 9	11 0	10 9	11 9	10 0
September	9 0	8 3	9 10	8 6	10 0	8 6	10 9	10 0	11 0	10 9	9 9	9 0	11 3	10 0	9 9	9 6	11 0	10 6	11 9	11 0
October	9 0	8 3	8 9	7 10	9 6	9 0	10 3	9 6	11 0	10 6	10 0	9 0	10 3	9 9	10 0	8 9	10 6	9 6	11 3	9 9
November	9 3	8 5	8 7	7 6	9 6	8 0	10 6	9 9	10 6	9 10	9 3	8 6	10 0	9 3	9 0	8 3	11 0	9 6	10 3	9 3
December	....	....	....	....	10 0	8 3	10 9	9 9	10 0	9 3	9 0	8 6	10 0	8 6	9 3	7 6	10 9	10 0	10 3	9 6

No. 4.—FARRAN'S POINT CANAL, &c.—*Continued.*

Month.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	10 0	9 6	10 6	8 9	8 9	8 4	9 6	8 3	9 0	8 3	10 0	8 0	9 0	8 3	8 9	7 9	10 0	8 6
February	9 6	9 6	8 9	8 0	8 9	8 3	8 9	8 3	9 6	8 3	9 0	8 6	8 6	7 6	8 0	7 0	8 6	8 6
March	10 3	9 3	8 9	8 3	9 0	8 3	9 0	8 6	8 9	8 6	9 0	8 6	8 6	7 6	8 6	7 3	8 9	8 6
April	10 6	9 9	9 3	8 6	9 0	8 6	10 3	8 9	8 9	8 6	9 6	8 9	10 3	8 6	8 9	8 3	9 9	9 0
May	11 6	10 0	8 9	8 6	11 3	9 0	11 9	9 9	9 0	8 6	10 0	9 0	10 0	9 6	8 9	8 6	10 3	9 9
June	11 3	10 0	9 0	8 6	9 9	9 3	10 6	10 0	10 3	9 6	10 6	9 9	10 9	10 0	10 0	8 9	10 6	10 0
July	11 6	11 3	9 6	8 3	9 9	9 6	10 0	9 9	10 0	8 9	10 0	9 9	10 0	9 9	9 6	9 0	....	....
August	10 6	9 0	9 6	9 0	9 9	9 6	9 9	8 9	10 0	9 0	9 9	9 0	9 9	9 0	9 6	9 3	....	....
September	10 3	9 0	9 3	8 6	9 9	9 3	9 0	8 1	9 0	8 9	9 0	8 9	9 0	8 6	9 9	9 3	....	....
October	10 0	9 3	9 0	8 3	9 9	9 3	9 0	8 0	9 3	8 9	9 3	8 9	9 0	8 6	9 9	9 0	....	....
November	9 3	8 6	11 9	8 6	10 0	9 3	9 0	8 3	9 3	8 9	9 9	9 0	9 0	8 6	9 9	8 6	....	....
December	9 9	8 9	9 9	8 6	9 0	8 6	9 0	8 3	9 6	8 6	10 6	9 0	9 3	8 6	9 3	8 0	....	....

APPENDIX No. 46.—*Continued.*

No. 5.—RAPIDE PLAT CANAL.—Depth of Water on Lower Mitre Sill, Lock No. 23—(from Lockmaster's Returns).

MONTH.	1853.		1854.		1855.		1856.		1857.		1858.		1859.		1860.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	10 6	9 0	8 6	6 9	9 9	9 0	9 0	8 0	13 0	11 3	11 6	10 0	11 0	9 9
February	....	....	10 0	9 0	8 0	7 0	9 9	9 0	8 6	8 0	12 0	11 0	11 0	9 0	10 6	10 0
March	....	....	9 9	9 0	8 3	7 0	9 6	8 3	8 9	8 0	11 9	11 0	12 9	10 0	11 0	9 9
April	....	....	9 9	9 0	9 3	8 0	10 3	8 3	10 0	8 9	12 0	11 0	13 1	11 3	10 9	10 3
May	....	....	11 0	9 9	9 6	8 6	11 0	10 3	11 0	9 6	12 0	11 3	13 3	12 0	11 0	10 3
June	....	....	11 3	10 9	10 3	9 6	11 0	10 6	11 9	10 9	12 9	11 9	12 9	12 3	11 0	10 6
July	....	....	11 0	10 9	10 3	9 9	10 9	10 3	11 9	11 3	12 10	12 3	12 9	12 0	11 6	10 9
August	11 6	10 9	10 6	9 9	10 6	10 0	10 6	9 6	12 0	11 0	12 9	12 3	12 6	11 9	11 0	10 6
September	....	....	10 0	9 3	10 6	9 6	10 0	9 3	11 9	11 0	12 6	11 6	12 3	10 0	11 3	10 3
October	....	....	10 6	8 8	10 3	9 9	9 6	8 0	11 3	10 0	11 6	10 6	10 0	9 3	10 9	9 0
November	10 6	9 3	9 3	8 5	10 0	9 3	9 3	7 9	12 9	10 0	11 3	10 9	10 6	9 9	13 0	9 0
December	10 0	9 9	8 6	7 0	10 0	9 0	9 3	7 0	11 9	10 9	11 3	10 0	10 6	9 0	10 9	9 6

No. 5.—RAPIDE PLAT CANAL.—*Continued.*

MONTH.	1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	10 6	9 9	11 0	10 0	10 9	9 6	11 6	7 3	10 6	9 6	9 6	7 0	10 3	8 0
February	10 9	9 9	10 9	10 6	11 0	9 9	9 3	8 3	10 3	8 0	7 8	6 3	9 0	8 0
March	10 9	10 10	10 9	10 0	10 0	9 3	10 0	8 9	11 0	7 9	8 5	6 6	10 8	8 4
April	11 9	10 0	12 9	10 3	11 9	9 3	10 6	9 3	11 6	9 9	10 0	8 3	11 2	10 0
May	12 9	11 0	13 4	12 3	12 0	11 3	11 6	10 3	11 6	10 6	10 9	9 6	12 0	10 0
June	12 9	12 0	12 9	11 9	12 0	11 6	12 0	11 3	11 6	10 3	10 9	9 6	12 10	11 0
July	12 8	11 6	12 6	12 0	11 9	11 3	11 3	10 9	11 6	10 3	11 0	10 0	....	....
August	12 3	11 6	12 3	11 0	11 6	10 3	10 9	10 6	11 0	9 9	10 6	10 0	....	....
September	12 6	10 9	11 9	10 3	10 6	10 0	10 6	9 6	10 0	8 6	10 9	9 0	....	....
October	11 9	11 0	11 6	10 0	10 6	9 6	10 6	9 6	....	....	10 6	8 10	....	....
November	12 0	10 3	11 0	9 3	10 9	9 3	10 6	9 6	9 9	8 0	10 6	8 9	....	....
December	12 9	10 9	10 6	9 6	11 6	9 3	11 9	9 3	9 9	8 6	16 6	9 0	....	....

APPENDIX No. 46.—*Continued.*

No. 6.—POINT IROQUOIS CANAL, or FOOT OF GALOPS CANAL.—Depth of Water on Lower Mitre Sill, Lock No. 25—(from Lockmaster's Returns).

MONTH.	1858.				1859.				1860.				1861.				1862.				1863.				1864.				1865.				1866.				1867.			
	Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January	....		....		13	9	12	3	13	5	11	9	12	9	11	8	13	10	12	0	13	0	11	10	13	5	9	1	13	1	11	2	11	8	9	0	13	0	11	10
February	....		....		13	8	11	10	13	1	12	0	12	5	11	8	13	3	12	0	13	10	11	0	12	6	11	0	11	8	10	3	10	6	8	0	12	9	11	8
March	....		....		14	9	12	2	13	8	12	6	13	9	11	10	13	0	11	10	13	5	11	8	12	8	11	4	13	9	10	8	11	6	9	5	13	2	11	8
April	....		....		16	0	14	0	13	8	12	8	14	6	12	3	15	9	12	10	14	3	12	6	13	5	12	0	14	6	12	6	12	6	10	2	14	3	12	7
May	....		....		16	6	15	0	13	8	12	10	16	8	13	8	16	10	14	9	14	11	13	0	14	9	13	0	14	6	13	1	12	9	11	1	15	2	13	10
June	....		....		16	2	15	6	13	8	13	4	15	6	14	8	15	6	14	3	15	2	14	0	15	2	14	4	14	11	13	6	13	5	12	4	15	6	14	5
July	....		....		16	3	14	10	14	3	12	10	15	6	14	3	15	6	14	7	14	6	13	5	14	9	13	6	14	6	13	0	13	7	12	6	....		....	
August	....		....		15	6	14	6	13	8	13	0	15	1	14	3	15	2	13	9	14	2	13	0	14	2	12	9	14	3	12	3	13	3	12	6	....		....	
September	....		....		14	11	12	9	13	5	12	4	14	6	12	9	14	9	12	11	13	8	12	7	13	6	12	2	12	6	10	8	13	6	11	4	....		....	
October	15	5	13	3	14	8	13	1	13	9	10	11	14	6	13	8	13	10	12	4	13	0	12	0	13	5	11	8	12	7	9	9	13	4	11	9	....		....	
November	14	3	13	0	14	2	11	9	15	6	11	9	14	8	12	6	14	0	11	6	13	3	11	3	14	3	11	10	12	0	10	3	13	2	11	9	....		....	
December	14	1	11	3	13	10	11	2	13	2	12	0	15	0	13	0	13	0	11	0	14	6	10	9	14	10	12	4	11	11	10	6	13	10	11	10	....		....	

APPENDIX No. 46.—*Continued.*

No. 6.—*Continued.*—GALOP'S CANAL, GUARD LOCK.—Depth of Water on Lower Mitre Sill Lock No. 27—(from Lockmaster's Returns).

MONTH.	1857.				1858.				1859.				1860.				1861.				1862.			
	Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January	....		....		12	2	10	9	11	3	9	6	11	4	9	2	10	6	8	6	11	4	9	2
February	....		....		11	6	9	8	11	2	9	10	10	6	8	9	10	2	8	1	10	2	9	4
March.........	....		....		11	5	10	9	12	3	10	5	11	2	10	4	11	0	10	1	10	7	9	6
April..........	....		....		12	0	10	9	12	9	11	5	11	0	10	3	12	0	10	9	12	6	10	6
May	11	3	10	3	12	0	11	0	13	0	11	9	11	3	10	6	13	0	11	3	13	0	12	2
June..	11	11	11	0	12	9	12	0	12	11	12	5	11	3	10	9	12	9	12	0	12	8	11	9
July	11	10	11	3	12	11	11	9	12	9	12	0	11	6	10	6	12	6	12	0	12	7	11	9
August..	11	10	11	2	12	9	11	9	12	6	11	3	11	9	10	6	12	0	11	6	12	2	11	3
September ...	11	9	11	0	12	6	11	6	12	0	10	0	11	4	10	0	12	0	16	9	11	9	10	9
October.	11	6	10	1	12	9	10	6	11	6	11	8	10	5	9	5	12	0	10	9	11	0	10	4
November ...	12	0	10	0	11	6	10	3	11	0	9	9	11	8	9	10	12	3	10	4	11	0	9	7
December ...	12	0	10	5	11	3	10	5	11	0	9	6	10	9	10	0	12	6	10	4	10	7	9	7

MONTH.	1863.				1864.				1865.				1866:				1867.			
	Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.		Highest.		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January	10	9	9	10	12	0	8	0	10	5	8	0	9	6	8	4	10	6	8	3
February	10	8	9	6	10	0	9	1	8	11	7	6	8	6	7	2	10	3	9	0
March.........	10	11	9	4	10	4	9	4	11	0	9	0	9	6	8	3	10	7	10	0
April..........	12	0	10	2	11	0	9	8	12	6	10	10	10	2	9	0	11	6	10	2
May	12	2	11	3	12	2	10	10	11	8	10	6	10	6	9	6	12	3	11	3
June..	12	9	11	6	12	3	11	5	11	10	11	0	10	9	10	0	12	6	11	9
July	12	0	11	1	12	0	11	2	11	8	10	6	10	9	10	0	....		....	
August..	11	6	10	7	11	6	10	7	10	9	10	4	10	9	10	4	....		....	
September ...	11	0	10	6	11	0	10	0	10	7	9	3	11	3	10	0	....		....	
October.	10	9	10	0	11	0	9	4	10	4	8	9	10	6	9	8	....		....	
November ...	10	6	9	6	12	0	10	1	10	4	9	2	10	9	9	8	....		....	
December ...	11	0	9	0	12	0	10	2	10	0	8	8	11	0	10	3	....		....	

APPENDIX No. 46.—*Continued.*

No. 7.—WELLAND CANAL.—Depth of Water on Lower Mitre Sill, Lock No. 1, Port Dalhousie—(from Lockmaster's Returns).

MONTH.	1849.		1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.	
	Highest.	Lowest.	Highest	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January			12 0	11 9	11 9	11 8	12 2	12 2	13 6	13 3	13 6	12 6	12 0	11 6	12 2	11 9	11 10	11 6	14 10	14 3
February			12 1	11 11	12 7	11 9	12 4	12 1	13 6	13 0	13 1	12 8	11 11	11 2	11 10	11 7	11 10	11 6	14 10	14 2
March			12 6	12 1	12 7	12 1	12 9	12 4	13 9	13 4	13 6	12 6	12 0	11 3	12 2	11 8	12 7	11 8	14 10	14 5
April			12 11	12 6	13 0	12 7	13 6	12 10	13 11	13 7	13 6	13 0	12 1	11 6	13 3	12 1	13 4	12 6	15 2	14 9
May			13 3	12 11	13 3	13 2	14 4	13 6	15 0	13 11	14 5	13 7	12 11	12 0	14 0	13 3	14 3	13 5	15 9	15 2
June	13 2	13 0	13 4	13 3	13 5	13 3	14 6	14 3	15 6	15 0	14 5	14 0	13 7	12 11	14 6	13 10	14 9	14 1	16 0	15 8
July	13 1½	12 8	13 2	12 9	13 4	13 1	14 3	14 4	15 4	14 6	14 6	14 4	13 10	13 7	14 7	14 3	15 0	14 8	16 2	15 10
August	12 7½	12 5	12 8	12 6	13 1	13 0	13 10	13 10	14 5	13 9	14 5	14 0	13 9	13 6	14 4	13 7	15 1	14 10	16 0	15 8
September	12 5	11 10	12 6	12 4	13 0	12 8	13 5	13 5	14 3	13 3	14 2	13 5	14 6	13 5	13 7	12 0	15 0	14 6	15 8	15 1
October	11 11	11 8	12 4	11 8	12 7	12 3	13 4	13 4	14 2	13 0	13 6	12 9	13 5	12 9	12 11	12 3	14 8	14 1	15 5	14 10
November	11 10	11 8	11 8	11 6	12 4	12 3	13 6	13 3	13 7	13 0	13 1	12 4	12 10	12 4	12 4	11 9	14 7	14 0	15 1	14 9
December	11 8	11 7	11 8	11 8	12 3	12 2	13 2	13 2	13 8	12 11	12 5	11 7	12 6	12 0	11 11	11 6	14 8	14 6	15 2	14 7

No. 7.—WELLAND CANAL, &c.—*Continued.*

MONTH.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest,	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	15 1	14 7	13 11	13 7	....	....	14 8	13 4	13 10	13 5	13 5	12 6	13 9	13 3	13 0	11 0	13 9	13 4
February	14 11	14 7	13 10	13 7	....	....	14 2	13 6	14 1	13 7	13 4	12 3	13 6	13 0	12 3	11 9	14 0	13 5
March	15 0	14 7	13 10	13 6	....	....	14 4	13 7	14 5	13 7	13 4	12 11	14 4	13 0	12 8	11 9	14 0	13 6
April	15 4	14 9	14 0	13 8	....	....	15 7	14 1	15 0	14 0	14 3	13 3	14 8	13 8	13 2	12 5	14 6	13 8
May	15 8	15 3	14 0	13 7	....	..... h..	16 0	15 7	15 5	14 11	15 2	14 2	14 11	14 7	13 6	13 0	15 5	14 6
June	15 11	15 8	14 2	13 11	....	....	15 9	15 5	15 2	15 0	15 4	14 11	14 10	14 5	13 9	13 3	15 6	15 0
July	16 0	15 9	14 4	14 1	....	....	15 7	15 2	15 0	14 8	14 11	14 4	14 7	13 10	13 11	13 7	....	....
August	15 11	15 6	14 3	14 0	15 5	14 9	15 4	14 9	14 8	14 3	14 6	13 11	14 2	13 9	13 8	13 5	....	....
September	15 7	15 1	14 2	13 10	14 11	14 2	14 9	14 1	14 5	13 8	14 2	13 4	14 6	15 4	13 7	13 3	....	....
October	15 0	14 4	....	....	14 10	14 6	14 3	13 6	13 7	13 4	13 8	13 4	13 8	13 1	13 8	13 1	....	....
November	14 4	13 10	....	....	15 4	14 6	13 10	13 5	13 6	13 0	13 7	12 9	13 4	12 8	13 8	13 0	....	....
December	13 11	13 6	....	....	14 9	13 10	13 6	13 3	13 6	13 1	13 10	12 8	13 0	12 6	13 9	12 9	....	....

APPENDIX No. 46.—*Continued.*

No. 7.—*Continued.*—WELLAND CANAL.—Depth of Water, &c., Lock No. 27, Port Colborne—(from Lockmaster's Returns).

MONTH.	1849.		1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	....	....	15 2	11 1	13 11	9 9	14 4	11 3	14 8	11 7	14 4	10 9	13 0	12 5	11 9	10 11	16 7	12 1
February	....	....	13 4	11 0	12 2	9 9½	12 6	11 5	12 9	12 10	12 7	11 0	12 3	11 1	12 9	11 8	13 3	10 10	13 4	11 6
March	–	.. ..	15 0	11 6	13 2	11 4	13 8	11 2	14 0	12 11	13 7	11 3	13 5	10 10	12 4	11 9	13 5	11 0	13 3	12 9
April	....	....	12 10	11 6	13 5	11 1	14 2	9 10	13 10	11 2	13 8	11 0½	12 6	11 4	13 0	12 0	16 4	12 9	14 4	12 0
May	13 6	12 0	12 10	11 5	16 4	12 1	16 4	13 0	14 5	13 3	13 10	12 1	13 0	11 7	12 10	12 4	13 5	12 2	15 9	12 7
June	12 8	11 8	12 6	11 9	13 10	12 7	15 0	12 11	15 5	13 5	13 4	12 10	13 3	12 2	13 3	12 5	13 9	12 11	15 5	13 8
July	12 8½	11 6	12 10	11 9	14 3	12 6	14 11	12 2	14 5	13 5	14 3	12 9	14 5	12 5	13 3	12 5	13 9	13 0	15 1	14 0
August	13 3	11 11	12 9	11 5	13 3	12 6	13 6	13 0	13 9	13 3	13 2	12 1	14 7	12 9	13 1	12 5	13 9	13 0	15 5	14 0
September	12 6	10 9	12 5	10 8	13 5	12 1	14 5	12 6	14 6	12 2	12 8	11 8	13 10	12 0	13 8	11 10	13 5	12 9	14 5	13 5
October	12 5	10 9	13 2	11 1	14 1	12 1	13 5	11 7	14 11	12 3	13 10	11 8	14 5	11 9	12 9	11 1	13 3	11 7	17 0½	12 5
November	13 10	11 7	12 4	10 9	14 3	12 1	13 10	11 10	13 5	12 0	14 5	11 7	15 7	12 2	17 0	11 3	14 10	12 5	14 2	13 0
December	13 8	11 6	14 10	9 10	14 2	11 10	17 7	12 4	15 10	11 10	14 8	11 3	14 5	12 3	17 7	10 6	15 8	12 6	17 3	13 0

No. 7.—WELLAND CANAL, &c.—*Continued.*

MONTH.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	14 9	13 0	13 4	12 10	13 9	11 8	16 3	12 5	17 7	12 10	17 9	11 3	13 7	10 9	16 2	10 10	12 10	11 2
February	17 8	11 2	13 3	12 4	12 9	10 3	14 5	12 2	14 5	13 0	13 0	11 10	11 7	10 7	13 3	11 0	12 3	10 5
March	18 9	12 11	14 4	12 7	13 9	12 0	13 9	11 9	14 7	12 9	13 9	11 6	13 11	10 4	13 0	10 5	13 0	11 0
April	17 11	13 5	14 5	12 11	13 11	12 6	15 2	12 0	14 10	13 0	13 5	12 1	13 8	11 8	13 6	10 10	13 3	11 7
May	16 1	13 7	14 4	13 0	15 4	13 2	15 6	13 7	14 7	11 1	14 0	12 11	13 1	11 11	13 2	11 10	13 7	12 1
June	14 9	13 9	16 4	13 2	14 0	13 0	14 5	13 4	14 6	13 0	14 0	13 0	13 5	12 4	13 11	12 2	13 7	12 10
July	14 8	13 9	14 4	13 0	14 4	13 3	14 5	13 10	13 7	13 0	13 6	12 10	13 8	12 1	13 6	12 9	....	....
August	14 5	13 4	14 2	13 0	14 3	12 11	14 5	13 2	14 6	13 1	14 0	11 4	13 1	11 7	13 2	12 0	....	....
September	15 6	12 1	15 1	12 9	14 5	13 1	14 5	12 11	13 9	12 7	14 4	12 2	14 0	11 3	13 11	11 5	....	....
October	16 3	12 4	13 5	12 7	14 10	13 0	14 8	12 5	16 1	11 11	14 2	12 0	14 2	10 3	16 6	12 4	....	....
November	16 2	12 9	16 2	12 4	15 10	11 7	14 7	12 0	14 4	11 7	15 1	12 1	14 9	11 3	14 2	11 9	....	....
December	13 7½	12 1	13 8	12 2	15 5	13 1	14 7	11 9	15 5	11 7	15 7	11 9	13 7	11 0	15 7	12 3	....	....

APPENDIX No. 46.—*Continued.*

No. 7.—*Cont'd.*—WELLAND CANAL.—DEPTH of Water on Lower Mitre Sill of Lock No. 29, Port Maitland—(from Lockm's Returns).

MONTH.	1849.		1850.		1851.		1852.		1853.		1854.		1855.		1856.		1857.		1858.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
February	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
April	....	....	....	....	11 0	9 1	12 10	9 5	12 4	10 6	12 4	11 0	....	....	....	....	11 6	9 6	11 9	10 3
May	....	....	11 6	9 8	12 3	10 4	14 6	11 6	13 8	11 0	12 0	11 0	11 6	9 10	12 0	10 3	12 0	10 5	12 4	9 11
June	11 2	10 6	10 8	9 10	11 7	10 6	12 6	11 10	13 4	12 0	12 10	11 0	12 0	10 6	12 4	10 3	12 3	11 2	12 0	10 6
July	11 6	10 4	10 10	9 8	12 6	10 11	12 11	11 7	12 6	10 10	12 3	10 5	12 6	10 9	12 0	11 2	12 9	11 6	11 6	10 8
August	11 0	10 6	10 9	9 4	12 2	10 9	12 2	11 4	12 0	11 4	11 10	10 8	13 2	11 0	12 0	10 8	12 0	11 4	11 11	10 7
September	10 11	9 1	10 11	9 3	12 5	9 11	13 2	11 1	12 6	10 6	11 9	10 2	11 10	9 10	12 6	10 6	12 10	10 7	13 6	11 11
October	11 0	9 1	10 11	9 0	12 6	10 0	11 11	9 10	12 10	10 7	11 7	9 9	12 0	10 6	12 10	10 7	11 10	10 3	12 4	10 2
November	11 11	9 0	10 2	9 0	12 6	10 0	12 1	10 2	11 9	10 6	15 0	9 3	12 6	10 3	15 3	10 6	13 6	10 3	12 8	10 8
December	11 8	9 0	10 11	9 0	12 3	10 3	12 6	10 9	15 3	10 6	11 6	9 10	15 3	10 6	11 9	9 6	11 11	10 3	12 6	10 9

No. 7.—WELLAND CANAL, &c.—*Continued.*

MONTH.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	....	....	....	....	....	....	12 10	11 0	14 0	9 10	11 7	10 0	11 6	9 0	11 11	10 10
February	....	....	....	....	....	....	11 11	10 10	12 8	10 5	12 10	10 3	11 0	9 0	11 3	9 0	11 8	10 10
March	....	....	....	....	....	....	12 2	10 4	12 6	11 1	11 10	10 0	11 6	9 1	10 8	9 10	11 3	9 3
April	16 3	11 10	....	....	12 10	10 6	14 0	11 8	12 9	11 2	12 6	10 3	12 6	10 1	12 0	9 6	12 0	10 0
May	13 8	12 1	12 9	11 10	13 0	11 6	13 3	12 0	13 0	11 0	11 8	10 0	12 2	10 1	11 9	10 6	13 3	10 7
June	12 0	11 4	12 11	11 1	12 10	10 6	13 0	12 0	13 4	11 7	12 0	10 3	12 0	10 7	13 6	10 10	12 6	11 6
July	13 3	12 2	12 11	11 6	12 10	11 3	13 0	11 10	12 10	11 3	12 2	10 7	12 1	10 7	12 6	10 6	....	....
August	13 0	11 10	12 4	11 7	12 10	11 5	12 10	11 5	12 8	11 0	12 10	10 8	12 2	10 6	11 11	10 6	....	....
September	13 0	10 3	13 0	10 7	12 10	10 4	12 5	11 0	11 9	11 0	12 5	11 2	11 6	10 2	12 3	10 0	....	....
October	13 0	10 5	12 4	10 0	13 0	11 0	12 9	11 1	12 9	10 6	12 9	10 10	12 0	9 2	14 0	10 7	....	....
November	16 0	11 0	15 3	10 6	13 6	11 0	12 4	10 2	12 11	10 6	12 4	10 1	12 6	9 11	12 10	10 5	....	....
December	12 6	10 9	....	....	11 10	10 0	17 5	10 10	14 0	10 0	12 2	10 10	11 7	10 0	12 6	10 11	....	....

APPENDIX No. 46.—*Continued.*

SAULT STE. MARIE SHIP CANAL.

No. 8—Depth of water on Lower Mitre Sill, general average, 12 feet.
Do Upper do do 12 feet 6 inches.

REMARK.—The above is the average since the Canal has been constructed.

(Signed,) JOHN WILSON,
Collector.

CUSTOM HOUSE, PORT OF SAULT STE. MARIE,
March 15, 1867.

No. 9.—ST. OURS LOCK.—DEPTH of Water on Lower Mitre Sill—(from Lockmaster's Returns.

MONTH.	1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	14 9	13 6	12 10	10 8	14 0	12 4	17 5	16 1	11 9	8 11	16 7	13 9
February	13 6	12 4	12 5	11 4	12 10	11 4	16 8	15 1	12 10	10 6	17 3	13 5
March	13 6	12 4	15 3	12 4	15 9	12 4	29 9	14 9	14 10	12 2	17 0	16 2
April	24 10	13 0	23 11	15 2	16 8	13 6	24 8	16 5	18 9	14 6	22 5	17 0
May	20 6	15 0	19 6	15 10	18 5	16 1	17 4	15 9	16 7	13 5	20 4	18 6
June	14 16	11 0	15 10	11 7	15 8	11 4	15 5	11 0	15 4	12 4	18 9	13 9
July	11 0	9 6	11 10	10 3	10 9	8 10	11 9	10 10	12 2	9 11	....	....
August	10 0	8 11	11 0	9 3	9 6	8 6	10 8	8 11	10 4	9 5	....	....
September	11 2	9 2	10 0	8 10	9 10	8 2	9 6	7 9	13 1	10 1	....	....
October	10 10	9 1	10 3	9 1	11 4	8 10	8 2	7 2	12 5	9 1	....	....
November	11 9	9 6	11 4	9 1	12 4	10 3	10 4	7 1	14 4	9 10	....	....
December	14 1	10 2	14 6	9 9	17 4	12 2	10 7	7 10	17 2	13 3	....	....

No. 10.—CHAMBLY CANAL.—DEPTH of Water on the Upper Sill of Lock No. 1—(from Lockmaster's Register).

MONTH.	1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	....	....	....	....	....	....	....	....	....	....
February..............................	....	....	....	....	....	....	....	....	....	....
March	....	....	....	....	....	....	....	....	....	....
April.................................	....	....	....	....	....	11 8	....	10 6	....	....
May	....	....	11 4	10 8	11 6	10 8	10 6	9 8	12 9	11 6
June	....	....	10 11	8 7	10 8	9 3	10 0	9 2	12 4	10 6
July..................................	....	....	8 9	7 10	9 4	8 8	9 3	8 5	....	....
August................................	....	....	7 11	7 5	8 11	7 10	8 8	8 1	....	....
September	....	....	8 0	7 2	8 0	7 3	9 9	8 3	....	....
October	9 10	8 5	8 8	7 10	8 3	6 9	9 5	9 0	....	....
November..............................	9 4	8 5	9 9	8 7	7 3	6 6	9 10	8 10	....	....
December..............................	....	....	10 0	9 9	....	....	....	9 11	....	....

APPENDIX No. 46.—*Continued.*

No. 11.—STE. ANNE LOCK, OTTAWA RIVER.—DEPTH of Water on Lower Mitre Sill—(from Lockmaster's Returns).

Month.	1852.		1853.		1854.		1855.		1856.		1857.		1858.		1859.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest,	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January......	....	....	9 0	7 3	7 7	6 9	7 5	6 11	8 7	7 6	7 9	7 1	8 4	7 9	7 8	7 2
February	....	....	8 5	6 10	7 8	6 8	7 8	6 6	7 8	7 0	7 10	6 11	8 8	7 11	7 4	6 8
March	....	....	7 5	6 5	7 10	6 3	7 6	6 1	7 8	6 3	7 10	7 0	8 8	7 2	9 6	6 9
April.........	....	....	9 2	7 1	8 7	6 8	12 10	6 1	9 8	6 2	10 10	7 2	11 2	8 10	10 1	8 9
May........	....	....	10 6	9 1	14 0	11 0	13 6	11 10	10 6	8 8	13 10	10 9	11 9	11 2	13 0	10 2
June...........	....	....	10 2	8 6	13 0	9 2	11 10	10 1	8 7	7 6	13 6	11 7	11 9	9 6	12 2	10 2
July	....	....	8 6	7 1	9 2	7 2	9 10	7 9	8 1	7 6	11 6	9 11	9 5	8 0	10 0	8 1
August........	....	....	7 0	6 8	7 2	5 11	7 9	6 8	7 5	6 5	10 1	8 10	8 5	7 0	8 2	6 11
September	6 6	6 3	7 3	6 4	6 2	5 9	9 9	6 5	7 7	6 9	8 11	8 1	9 3	7 0	7 6	6 8
October...............	6 8	6 4	7 0	6 7	6 9	6 2	8 0	6 5	8 6	7 7	8 5	7 8	8 8	8 0	8 0	7 5
November...........	7 2	6 2	7 6	6 5	7 11	6 9	9 7	7 9	8 3	7 8	10 0	7 5	8 7	7 6	10 1	7 4
December	7 10	6 10	....	....	8 1	7 6	9 0	7 11	8 3	7 8	8 10	7 11	7 4	6 11	9 3	8 7

No. 11.—STE. ANNE LOCK, OTTAWA RIVER, &c.—*Continued.*

Month.	1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January......	8 9	7 5	8 2	7 3	9 3	8 3	7 4	6 9	8 9	7 1	8 4	7 8	6 7	5 11	9 3	8 7
February	7 10	7 1	8 4	7 4	8 4	7 5	7 2	6 8	7 8	6 9	7 9	6 10	6 8	5 11	8 6	7 8
March	8 6	7 3	8 9	7 9	7 6	6 9	6 11	6 6	6 9	6 6	10 1	6 10	6 9	6 4	7 9	6 10
April..................	10 0	8 3	13 4	8 0	13 10	6 8	12 8	6 8	13 4	6 9	12 10	10 5	13 7	6 3	11 3	7 0
May	13 7	9 11	15 4	13 8	13 9	11 4	12 6	10 1	15 7	13 0	13 3	12 6	12 10	10 7	14 2	11 5
June.........	11 9	9 3	14 2	9 9	11 3	8 3	10 0	8 4	12 8	8 5	12 4	8 7	11 1	10 0	14 0	10 11
July......................	9 1	7 3	9 10	8 4	8 2	7 0	8 4	7 4	8 4	6 10	9 7	8 9	9 11	8 2	....	....
August........	7 3	6 9	8 6	7 3	7 3	6 8	7 4	6 3	6 10	6 1	9 3	8 0	8 1	7 1	....	....
September	7 3	6 8	8 0	6 10	8 3	6 6	6 8	6 3	6 5	5 11	7 11	6 6	9 5	7 3	....	....
October........	7 4	7 0	8 6	8 2	8 7	7 5	7 6	6 9	8 0	6 4	6 5	5 11	9 9	7 2	....	....
November...........	8 4	7 4	9 8	8 2	8 10	7 9	9 6	7 3	9 3	7 9	6 5	5 11	10 11	7 9	....	....
December	8 3	7 4	9 3	8 0	7 10	7 2	9 3	7 10	10 2	8 2	6 9	6 0	11 2	9 4	....	....

APPENDIX No. 46.—*Continued.*

No. 12.—CARILLON CANAL.—Depth of Water on the Lower Sill of Lock No. 1—(from Lockmaster's Returns).

MONTH.	1859.				1860.				1861.				1862.				1863.				1964.				1865.				1866.				1867.			
	Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January	10	7	9	9	10	0	9	4	9	0	8	0	11	0	8	7	9	0	6	8	10	6	10	0	11	0	9	7	7	1	6	7	12	0	10	6
February	10	2	9	9	9	11	9	1	7	6	7	5	8	6	7	3	9	0	8	0	10	0	7	8	9	0	8	4	7	2	6	3	11	0	8	1
March	....		....		10	0	8	4	8	2	7	0	7	6	6	0	8	0	7	0	8	0	7	0	11	4	7	6	8	0	7	2	8	0	8	0
April	....		....		11	3	9	9	14	10	9	0	16	3	8	4	16	0	6	9	16	0	8	1	14	2	12	10	16	0	8	7	15	6	9	3
May.......	....		....		15	0	11	7	17	0	15	6	16	1	13	2	13	5	16	6	17	5	16	0	15	6	14	0	15	0	13	6	16	9	15	5
June	12	8	11	1	13	0	10	0	....		....		11	6	9	3	10	0	9	0	13	0	9	8	13	9	10	0	13	0	11	0	14	0	11	11
July..................	10	9	8	7	9	2	7	7	....		....		7	10	7	5	9	0	7	6	8	0	7	5	11	1	10	0	10	0	8	4	....		....	
August	8	4	7	5	7	9	7	2	....		....		7	7	6	11	6	6	6	0	6	11	6	4	9	4	7	9	8	5	7	8	....		....	
September	8	7	7	0	7	7	7	1	....		....		10	10	7	1	6	10	6	2	6	4	6	0	8	0	6	9	10	10	9	0	....		....	
October	8	5	7	1	7	9	7	0	....		....		10	0	8	4	8	2	7	8	9	3	7	9	6	3	6	2	10	6	9	4	....		....	
November	10	3	7	9	9	3	8	2	....		....		10	0	9	0	11	0	9	0	10	3	9	2	7	1	6	9	11	7	9	8	....		....	
December	11	[illegible]	9	10	8	10	8	0	....		....		9	2	8	0	10	6	10	0	10	0	9	3	7	2	6	8	13	0	11	0	....		....	

No. 12.—CARILLON CANAL.—Depth of Water on the Lower Sill of Lock No. 3, (from Lock-Master's Returns).—(*Continued.*)

MONTH.	1859.				1860.				1861.				1862.				1863.				1864.				1865.				1866.				1867.			
	Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January	10	6	8	6	8	6	8	4	8	0	7	0	10	4	9	6	8	4	7	0	9	10	7	6	9	6	9	0	6	0	6	0	11	6	10	6
February	8	6	8	0	7	6	6	10	7	0	6	1	7	9	5	8	8	3	7	0	8	0	7	0	9	0	7	6	6	0	6	0	9	6	7	7
March	....		....		9	3	5	6	7	0	6	0	5	2	5	0	6	10	6	2	7	6	6	10	12	4	7	2	6	0	6	0	7	4	6	2
April	....		....		11	4	10	6	14	8	6	6	13	4	5	9	14	4	5	10	16	6	7	6	14	8	13	4	16	8	6	0	12	4	7	0
May.......	....		....		16	6	12	4	18	5	17	0	16	6	14	0	14	4	11	8	19	0	16	3	15	2	14	4	14	6	13	0	16	11	15	2
June	13	9	11	7	14	0	10	2	....		....		12	3	9	0	11	6	9	2	14	0	9	4	14	0	9	2	12	6	11	6	17	2	14	0
July..................	11	5	8	0	9	0	7	0	....		....		8	0	6	7	8	8	7	2	7	8	6	6	10	6	9	6	10	6	8	8	....		....	
August	7	11	7	0	6	9	6	5	....		....		6	10	5	9	6	6	5	10	6	0	5	8	9	8	8	0	8	2	6	10	....		....	
September	7	8	6	1	7	0	6	1	....		....		8	7	6	0	6	4	5	8	5	8	5	6	8	3	6	4	10	4	8	2	....		....	
October	8	5	7	7	6	11	6	7	....		....		9	1	7	6	7	6	7	0	8	9	6	6	6	4	5	6	11	0	9	6	....		....	
November.........	10	4	7	5	8	7	7	3	....		....		9	3	8	0	11	2	8	1	10	0	8	8	6	9	5	8	12	0	8	3	....		....	
December	10	4	9	4	8	1	7	3	....		....		8	4	7	5	11	0	8	4	9	8	8	9	7	0	6	0	13	0	10	11	....		....	

APPENDIX No. 46.—*Continued.*

No. 13.—CHUTE A BLONDEAU.—Depth of Water on the Lower Sill of Lock No. 4, at Chûte à Blondeau—(from Lockmaster's Returns).

MONTH.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	12 11	11 3	12 7	11 9	14 4	9 6	15 0	10 9	12 1	7 8	13 0	9 0	13 10	10 5	17 6	9 0	12 4	11 0
February	14 8	13 9	9 11	8 9	14 6	10 10	14 3	10 0	16 6	9 9	11 4	7 6	13 10	8 4	18 4	12 8	13 6	10 10
March	....	....	10 7	8 11	11 10	7 7	10 0	7 1	16 9	7 2	6 10	6 5	12 8	7 8	18 10	6 8	9 6	7 6
April	....	....	12 3	10 3	15 6	8 2	16 8	7 0	15 6	7 0	17 0	7 9	16 3	13 9	17 5	6 5	13 6	8 6
May	....	....	17 6	13 4	20 1	17 10	17 6	14 10	15 4	12 6	20 4	17 4	16 11	16 1	14 11	13 7	18 6	14 11
June	14 9	12 9	14 11	11 1	....	....	12 10	9 0	12 0	10 6	14 8	10 4	15 0	10 5	13 8	12 3	16 10	13 6
July	12 3	9 0	9 0	8 0	....	....	8 9	7 6	9 6	7 10	9 0	7 9	11 5	10 7	10 8	9 4	....	....
August	9 0	7 7	7 6	7 4	....	....	7 8	5 9	7 6	6 7	7 0	6 2	9 10	9 3	8 11	7 8	....	....
September	8 4	7 2	7 10	7 0	....	....	9 3	7 0	7 6	7 0	6 7	6 2	8 7	6 10	11 3	8 10	....	....
October	9 2	8 6	7 11	7 9	....	....	9 3	8 4	8 4	7 10	9 3	7 8	7 0	6 6	....	....	....	....
November	11 7	8 3	9 4	8 4	....	....	10 3	8 10	11 5	9 2	10 10	9 7	7 3	6 3	....	....	....	....
December	11 9	10 4	9 8	8 4	....	....	10 6	8 4	12 8	9 9	10 5	9 7	8 1	6 8	13 2	12 10	....	....

No. 13.—*Continued.*—CHUTE A BLONDEAU.—Depth of Water on the Upper Sill of Lock, No. 4, at Chûte à Blondeau)—from Lockmaster's Returns).—*Continued.*

MONTH.	1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.	Highest	Lowest.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January	14 0	11 1	14 2	11 6	18 8	9 8	14 9	12 2	11 0	7 5	12 8	9 4	14 9	11 0	14 0	6 0	14 10	12 8
February	14 10	13 7	20 0	12 7	18 10	14 5	14 10	11 3	14 10	8 6	11 0	7 4	17 8	11 6	16 4	11 8	13 0	10 0
March	....	....	18 8	8 4	20 0	8 9	15 5	6 9	14 6	7 0	7 0	6 3	12 3	8 0	15 7	6 4	12 6	7 1
April	....	....	11 10	9 3	15 0	8 4	17 5	6 6	15 0	6 10	16 8	6 4	15 9	12 3	17 1	6 0	13 0	7 2
May	....	....	17 0	11 10	20 0	15 4	17 0	14 6	15 0	10 2	20 6	17 0	16 6	15 0	17 0	12 9	18 0	13 3
June	15 3	12 3	15 0	10 8	....	....	13 6	9 2	12 0	12 0	15 6	9 4	14 9	10 1	13 4	11 10	17 6	13 0
July	12 1	8 9	10 5	7 8	....	....	9 1	7 4	9 6	7 8	9 0	7 6	11 2	10 4	11 2	9 1	....	....
August	8 9	7 4	7 9	7 0	....	....	7 7	6 10	7 8	6 4	7 0	6 1	10 5	8 6	9 1	7 5	....	....
September	8 2	7 0	7 9	6 8	....	....	9 1	6 9	7 4	6 6	6 7	6 1	8 11	6 7	11 0	8 2	....	....
October	8 10	7 8	7 8	7 4	....	....	9 6	8 3	8 4	7 5	8 10	6 8	6 6	6 0	11 0	7 7	....	....
November	11 5	7 11	9 1	7 4	....	....	9 11	8 5	11 3	8 0	10 7	9 0	6 7	6 0	13 6	8 6	....	....
December	13 7	10 0	11 10	8 0	....	....	12 0	7 10	13 3	9 0	12 0	9 10	7 6	6 0	14 10	10 8	....	....

APPENDIX No. 46.—*Continued.*

No. 14.—GRENVILLE CANAL.—Depth of Water on the Lower Sill of Lock No. 5—(from Lockmaster's Returns).

MONTH.	1859.				1860.				1861.				1862.				1863.				1864.				1865.				1866.				1867.			
	Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January	16	6	16	0	17	0	16	0	19	0	10	6	17	6	14	0	12	6	10	6	16	0	10	0	16	6	16	0	12	6	8	6	17	0	15	6
February	17	0	16	0	19	6	17	9	21	6	18	0	14	0	11	0	14	6	10	0	11	6	10	6	17	6	12	0	16	0	8	0	16	6	11	6
March	...	...	...	...	13	0	8	6	17	0	10	0	9	6	8	0	14	0	11	6	10	6	10	0	13	0	10	0	15	6	8	0	10	0	9	6
April	...	...	...	...	11	6	9	7	17	0	9	0	17	6	8	3	16	0	9	6	17	6	11	0	17	0	14	6	17	6	10	0	14	6	12	0
May	...	...	...	...	18	0	12	6	20	3	18	0	18	0	15	6	16	0	13	0	21	6	17	0	17	6	16	9	14	8	13	8	18	0	17	0
June	14	0	12	8	15	4	10	8	...	...	...	...	12	9	10	3	13	0	10	6	16	0	11	0	16	0	10	6	15	6	12	6	17	3	14	0
July	12	4	9	2	9	6	8	0	...	...	...	...	9	9	8	3	10	2	8	9	10	3	8	6	15	0	11	6	11	0	9	9	...	...	...	...
August	9	3	7	11	8	3	7	6	...	...	...	...	8	6	7	11	8	6	7	8	7	10	7	4	10	6	9	9	9	6	8	6	...	...	...	...
September	8	2	7	6	8	2	7	2	...	...	...	...	10	2	9	3	8	0	7	10	7	6	7	2	9	0	7	6	11	3	10	3	...	...	...	...
October	9	4	8	7	8	6	8	0	...	...	...	...	11	8	9	0	9	0	8	9	10	0	8	8	7	3	7	0	11	2	8	0	...	...	...	...
November	11	6	8	6	10	0	9	0	...	...	...	...	10	10	9	5	11	9	9	4	11	6	10	2	7	7	7	0	13	9	9	0	...	...	...	...
December	17	3	8	0	10	6	9	6	...	...	...	...	13	0	9	0	14	0	11	0	13	0	10	0	10	6	2	2	15	9	11	6	...	...	...	...

No. 14.—GRENVILLE CANAL.—Depth of Water on the Upper Sill of Lock No. 11—(from Lockmaster's Returns).—*Continued.*

MONTH.	1859.				1860.				1861.				1862.				1863.				1864.				1865.				1866.				1867.			
	Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.		Highest		Lowest.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
January	8	2	6	5	7	4	6	5	6	4	5	8	7	10	7	1	7	2	6	0	7	1	6	0	8	11	7	6	4	11	4	9	11	7	6	6
February	6	8	6	0	6	1	5	6	5	8	5	2	6	10	5	10	6	0	5	6	7	0	6	1	7	5	6	3	4	10	4	6	6	0	5	6
March	...	...	...	...	7	11	5	4	6	8	5	2	6	0	5	6	6	0	5	6	7	2	5	9	11	6	6	1	5	2	4	9	5	10	5	8
April	...	...	...	...	11	10	8	0	14	7	6	0	16	4	5	11	15	0	6	0	15	6	6	5	14	9	12	0	14	7	4	10	12	8	6	6
May	...	...	...	...	17	3	11	8	19	7	14	9	16	9	14	10	14	10	12	8	18	9	15	6	16	0	14	8	14	3	12	3	18	4	13	0
June	14	11	12	6	15	1	10	9	...	...	...	...	13	9	8	11	12	5	9	5	14	9	9	7	14	10	10	3	13	2	10	4	18	0	13	1
July	12	5	8	8	10	7	7	3	...	...	...	...	8	9	6	8	9	4	7	4	9	6	7	4	11	6	10	0	11	0	8	0	...	...	...	...
August	8	8	6	10	7	3	6	4	...	...	...	...	7	1	6	5	7	4	5	6	6	6	5	4	10	2	8	9	7	10	6	4	...	...	...	...
September	7	11	6	3	7	4	6	2	...	...	...	...	10	5	5	8	6	3	5	8	6	0	4	11	8	7	6	0	10	0	6	6	...	...	...	...
October	8	9	7	4	7	6	7	0	...	...	...	...	9	7	7	9	7	11	5	10	9	0	6	3	6	0	5	3	9	9	6	4	...	...	...	...
November	12	1	7	9	9	1	7	6	...	...	...	...	9	11	8	1	11	3	7	11	10	11	9	4	6	0	5	2	12	3	6	10	...	...	...	...
December	10	11	8	3	8	10	6	4	...	...	...	...	9	0	7	3	11	1	7	2	9	10	8	1	5	10	4	11	12	0	8	0	...	...	...	...

APPENDIX No. 46.—*Concluded.*

No. 15.—RIDEAU CANAL.—STATEMENT shewing the Water Level of the Ottawa River, at the Outlet Lock at Ottawa, as registered by the Lock-master.

YEARS.	January.				February.				March.				April.				May.				June.				July.				August.				September.				October.				November.				December.			
	1st.		15th.		1st.		15th.		1st.		15th.		1st.		15th.		1st		15th.		1st.		15th.		1st.		15th.		1st.		15th.		1st.		15th.		1st.		15th.		1st.		15th.		1st.		15th.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
1844	....		8	7	....		....		....		....		....		13	2	21	5	19	7	18	2	16	3	13	6	13	0	10	1	9	6	9	5	8	5	7	7	8	8	9	3	9	10	....		9	6
1845	8	8	10	2	7	11	8	0	9	5	10	0	13	5	13	10	24	0	23	6	18	6	14	4	11	10	10	8	9	5	8	6	7	7	8	6	10	2	13	9	12	9	14	0	13	0	13	3
1846	11	10	....		9	4	8	5	7	11	8	2	14	2	16	4	16	7	17	6	28	6	....		16	6	9	9	8	3	7	1	5	7	4	10	5	1	....		....		....		....		....	
1847	....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....	
1848	....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....	
1849	....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....		....	
1850	10	3	9	6	9	0	8	10	8	5	8	1	7	8	10	0	18	1	20	10	19	1	14	9	11	9	10	3	9	11	8	4	7	0	8	1	8	7	10	10	9	11	10	11	9	11	10	6
1851	9	8	8	7	8	3	8	1	8	9	8	9	14	4	16	8	18	8	20	6	19	11	18	4	15	6	12	5	11	4	10	0	8	10	8	9	7	3	7	6	8	5	9	1	8	6	8	7
1852	8	4	7	10	7	5	7	6	7	4	7	8	8	10	10	11	18	0	22	9	19	2	18	4	15	6	15	4	11	4	9	10	8	6	7	9	9	0	11	0	11	2	11	9	11	2	12	4
1853	8	3	11	0	9	7	9	4	8	10	8	1	7	10	11	10	14	10	17	8	18	0	17	8	13	9	10	7	7	9	7	11	7	2	7	10	8	6	9	6	8	6	10	5	11	9	10	0
1854	9	3	9	0	8	8	8	1	8	0	8	8	8	2	12	6	15	0	19	9	19	8	16	5	13	2	11	0	9	2	7	6	9	6	6	7	6	7	7	11	8	3	9	2	10	6	11	1
1855	10	4	9	4	9	2	9	6	8	1	7	9	7	5	8	5	21	0	21	8	18	6	17	10	14	6	11	4	9	6	7	9	7	6	7	9	7	7	9	9	10	1	13	10	12	7	13	0
1856	11	5	10	9	9	2	8	8	7	10	7	4	6	10	9	6	15	6	13	11	11	9	11	9	9	6	10	7	9	6	7	2	8	0	8	11	9	9	11	11	10	3	11	4	11	2	11	3
1857	10	2	9	5	9	7	9	9	10	7	9	9	9	8	13	3	15	9	21	6	21	9	21	4	19	0	15	1	15	0	14	0	12	8	11	1	11	5	10	4	9	5	13	4	11	8	10	0
1858	....		....		....		....		....		....		....		16	1	17	2	17	9	18	0	16	5	12	9	12	0	10	4	9	2	8	7	12	0	10	9	10	7	11	8	10	8	9	3	8	9
1859	8	4	7	11	7	4	7	5	7	4	9	0	13	3	12	5	16	5	20	1	19	9	15	6	14	6	12	3	10	3	9	9	7	6	7	11	9	9	10	6	9	7	9	11	12	4	12	9
1860	9	9	11	4	10	1	9	7	9	7	10	1	12	4	13	5	14	2	19	9	18	3	16	5	14	9	10	5	8	10	7	10	8	4	7	4	7	11	8	2	9	3	10	4	9	9	9	9
1861	9	0	8	8	8	6	9	2	9	5	10	2	10	2	13	9	17	6	24	10	22	6	18	8	14	7	12	11	10	10	9	2	8	3	8	9	8	9	12	2	10	7	13	2	10	8	13	0
1862	11	6	10	0	10	0	9	7	9	3	9	4	9	2	12	7	19	3	19	11	15	1	11	9	9	1	7	10	7	2	7	1	6	5	9	10	10	5	9	10	10	1	9	2	10	0	9	8
1863	9	3	9	1	8	9	8	4	8	2	9	8	8	4	13	10	17	10	16	5	14	3	12	1	9	8	9	7	7	2	6	7	6	3	5	11	6	5	8	1	9	4	9	9	11	15	12	3
1864	10	6	9	11	9	3	8	11	8	6	8	6	9	3	15	8	20	6	24	11	17	0	15	3	9	11	9	2	6	6	5	6	7	0	6	9	10	3	10	3	10	3	12	5	12	2	13	5
1865	11	11	10	4	9	6	8	8	8	2	8	2	13	11	17	9	20	7	19	10	19	10	14	7	12	10	13	7	13	5	11	10	10	1	7	8	6	8	6	4	6	5	6	8	6	11	6	11
1866	7	0	6	9	6	9	6	8	7	3	7	1	6	7	12	3	20	1	17	0	15	10	16	2	14	6	12	9	10	10	9	10	9	8	11	0	10	6	9	10	9	6	16	2	15	6	15	7
1867	14	8	13	0	11	7	10	6	10	1	9	8	9	3	11	8	16	2	21	1	22	4	20	0	16	0	....		....		....		....		....		....		....		....		....		....		....	

22nd September, 4 ft. 6 in. lowest; 25th May to June 7, 28 ft. 6 in. highest.
6 ft. 3 in. on 9th Sept., lowest.
Highest, 26 ft. 9 in.—29th April.

APPENDIX No. 47.

No. 1.—STATEMENT of the dates of Opening and Closing of Navigation at Quebec, Montreal, Kingston and Toronto, from 1814 to 1867.

	QUEBEC.		MONTREAL.		KINGSTON.			TORONTO.	
Years.	Opened.	Closed.	Opened.	Closed.	Opened.	Closed.	No. of days.	Opened.	Closed.
1814	April 28...	Dec. 7...	....	....	....	....	....	....	....
1815	do 28...	do 5..	....	....	....	....	....	....	....
1816	do 23...	Nov. 29...	....	....	....	....	....	....	....
1817	May 6...	Dec. 5...	....	....	....	....	....	....	....
1818	April 27...	do 1...	....	....	....	....	....	....	....
1819	do 30...	do 7...	....	....	....	....	....	....	....
1820	do 24...	do 1...	....	....	....	....	....	....	....
1821	May 3...	....	....	....	....	....	....	....	....
1822	April 29...	Dec. 3...	....	....	....	....	....	....	....
1823	do 25...	....	....	....	....	....	....	....	....
1824	do 20...	Dec. 11...	....	....	....	....	....	....	....
1825	do 19...		....	....	....	....	....	....	....
1826	do 22...	Dec. 21...	....	....	....	....	....	....	....
1827	do 14...	....	....	....	....	....	....	....	....
1828	do 12...	....	....	....	....	....	....	....	....
1829	do 18...	....	....	....	....	....	....	....	....
1830	do 17...	Dec. 4...	....	....	....	....	....	....	....
1831	do 21...	Nov. 30...	....	....	....	Dec. 19..	....	....	....
1832	do 29...	do 30...	....	....	April 27..	do 4..	222	....	....
1833	do 19...	do 25...	....	....	do 7..	Jan. 1 1834	270	....	....
1834	do 18...	Dec. 9...	....	....	March 19..	Dec. 22..	279	....	....
1835	May 4...	do 1...	....	....	April 6..	do 31..	270	....	....
1836	do 10...	do 1...	....	....	do 23..	do 26..	248	....	....
1837	do 2...	do 12...	....	....	do 11..	Jan. 16 '38	231	....	....
1838	do 1...	Nov. 26...	....	....	do 6..	Dec. 18..	257	....	....
1839	April 23...	Dec. 19...	....	....	do 8..	do 26..	255	....	....
1840	do 21...	do 2...	....	....	March 19..	do 23..	280	....	....
1841	May 4...	do 14...	....	....	April 23..	do 31..	253	....	....
1842	April 26...	do 2...	....	....	March 24..	do 31..	283	....	....
1843	May 5...	do 1...	....	....	April 25..	Jan. 3 1844	254	....	....
1844	April 23...	Nov. 29...	....	....	March 9..	do 12 '45	310	....	....
1845	do 23...	Dec. 2...	....	....	April 2..	do 9 1846	274	....	....
1846	do 14...	do 9...	....	....	March 31..	....	....	....	....
1847	May 11...	do 3...	....	....	April 11..	Jan. 6 1848	271	....	....
1848	April 18...	do 5...	....	....	do 3..	Dec. 30..	272	....	....
1849	do 24...	do 7...	....	....	do 3..	do 31..	273	....	....
1850	do 26...	do 10...	....	....	do 5..	do 26..	266	....	....
1851	do 22...	do 5...	....	....	do 2..	do 22..	265	....	....
1852	do 30..	do 19...	....	....	do 19..	Jan. 14 '53	271	....	....
1853	do 26...	do 3...	....	....	do 4..	do 5 1854	277	....	....
1854	May 5...	do 5...	April 25...	Dec. 6..	do 10..	do 13 '55	279	....	....
1855	do 8 ..	Nov. 27...	do 28...	do 12...	do 17..	do 1 1856	260	April 2...	Dec. 19...
1856	April 22...	Dec. 2...	do 24...	do 3...	do 8..	Dec. 31..	268	do 17...	do 22...
1857	do 28...	do 4...	do 18...	do 13 ..	do 2..	Feb. 2 1858	307	Feb. 27...	do 30...
1858	do 16...	do 3...	do 9...	do 12...	do 26..	Jan. 8 1859	258	March 4...	do 21...
1859	do 26...	Nov. 29...	do 4...	do 11...	do 15..	Dec. 25..	255	Feb. 7...	do 30...
1860	do 20...	Dec. 8...	do 10...	do 7...	do 12..	Jan. 10 '61	274	Jan. 10...	do 31...
1861	do 26...	do 17...	do 24...	do 22...	do 8..	do 4 1862	272	do 2...	do 31...
1862	do 11...	do 5...	do 23...	do 7...	do 14..	do 17 '63	279	do 2...	do 30...
1863	May 1...	do 4...	do 25...	do 12...	do 16..	do 1 1864	262	do 7...	do 21...
1864	April 19...	do 13...	do 13...	do 11...	do 5..	do 4 1865	275	Feb. 3...	do 29...
1865	do 18...	do 9...	do 10...	do 16...	March 28..	do 5 1866	282	March 25....	do 30...
1866	do 27...	do 15...	do 19...	do 15...	April 11..	do 5 1867	269	April 3...	do 26...
1867	May 2...	....	do 22...	....	do 8..	....	....	March 28...	....

APPENDIX No.

No. 2.—STATEMENT shewing the Opening and Closing of the Lachine, Beauharnois, Sault Ste. Marie Canals, St.

YEARS.	LACHINE CANAL.			BEAUHARNOIS CANAL.			CORNWALL CANAL.		
	Opened.	Closed.	No. of days opened.	Opened.	Closed.	No. of days opened.	Opened.	Closed.	No. of days opened.
1831	......	......	......	......	......	......	......	......	......
1832	......	......	......	......	......	......	......	......	......
1833	......	......	......	......	......	......	......	......	......
1834	......	......	......	......	......	......	......	......	......
1835	......	Nov. 22	......	......	......	......	......	......	......
1836	May 1	do 25	209	......	......	......	......	......	......
1837	April 26	do 24	213	......	......	......	......	......	......
1838	do 23	do 23	215	......	......	......	......	......	......
1839	do 11	do 23	227	......	......	......	......	......	......
1840	do 21	do 23	217	......	......	......	......	......	......
1841	May 1	do 25	209	......	......	......	......	......	......
1842	do 2	do 26	209	......	......	......	......	......	......
1843	do 4	do 28	209	......	......	......	April 10	Nov. 28	233
1844	April 23	do 17	209	......	......	......	do 24	Dec. 2	223
1845	May 5	do 28	208	October 11	Nov. 26	47	do 28	Nov. 29	216
1846	do 6	Dec. 9	218	April 16	do 29	228	do 20	Dec. 2	227
1847	do 5	do 13	223	May 5	do 28	209	May 1	do 4	218
1848	April 24	do 11	232	April 12	do 30	233	April 7	do 9	237
1849	do 21	do 10	234	do 19	Dec. 8	234	do 7	do 6	244
1850	do 22	do 7	230	do 26	do 4	223	do 20	do 7	232
1851	do 22	do 10	233	do 25	Nov. 25	215	do 25	do 12	232
1852	May 7	do 16	224	May 2	Dec. 13	226	May 1	do 16	230
1853	do 20	do 2	197	April 29	Nov. 24	209	April 29	do 14	230
1854	do 13	do 2	204	May 1	Dec. 2	216	do 30	do 10	225
1855	do 1	Nov. 28	212	do 1	Nov. 28	212	do 30	do 18	223
1856	do 1	Dec. 3	217	do 1	Dec. 1	215	do 28	do 6	223
1857	do 4	Nov. 27	208	do 2	Nov. 26	209	May 1	do 12	226
1858	April 25	Dec. 1	221	April 26	do 26	215	April 26	do 7	226
1859	do 21	Nov. 30	224	do 19	do 29	225	do 20	do 7	232
1860	do 20	Dec. 5	230	do 19	Dec. 3	229	do 21	do 10	234
1861	do 24	do 4	225	do 24	do 3	224	do 24	do 12	233
1862	May 4	do 6	216	do 30	Nov. 30	215	May 1	do 12	226
1863	do 4	do 10	220	May 2	Dec. 4	217	do 4	do 12	222
1864	April 25	do 10	229	April 24	do 3	224	April 27	do 10	227
1865	May 1	do 12	226	do 25	do 7	227	do 26	do 13	231
1866	do 2	do 13	226	do 30	do 8	223	do 30	do 13	227
1867	do 1	......	......	do 1	......	......	May 1	......	......

47.—*Continued.*

Cornwall, Farran's Point, Rapide Plat, Galops, Welland, Burlington Bay and Ours Lock and Chambly Canal.

FARRAN'S POINT CANAL.			RAPIDE PLAT.			THE GALOPS CANAL.		
Opened.	Closed.	No. of days opened.	Opened.	Closed.	No. of days opened.	Opened.	Closed.	No. of days opened.
April 13	Dec. 6	238	April 13	Dec. 6	238	April 13	Dec. 6	238
do 9	do 15	251	do 9	do 15	251	do 9	do 15	251
do 27	do 10	228	do 27	do 10	228	do 27	do 10	228
do 25	Nov. 25	215	do 25	Nov. 25	215	do 25	Nov. 25	215
do 13	do 24	226	do 13	do 24	226	do 13	do 24	226
May 1	Dec. 1	215	May 1	Dec. 1	215	May 1	Dec. 1	215
do 3	do 8	220	do 3	do 8	220	do 3	do 8	220
April 20	do 15	230	April 20	do 15	230	April 20	do 15	230
do 28	do 6	223	do 28	do 6	223	do 28	do 6	223
May 1	do 12	226	May 1	do 12	226	May 1	do 12	226
April 25	do 11	231	April 25	do 11	231	April 25	do 11	231
do 30	do 5	220	do 30	do 5	220	do 30	do 5	220
do 21	do 10	234	do 21	do 10	234	do 21	do 10	234
do 24	do 10	231	do 24	do 10	231	do 24	do 10	231
do 29	Nov. 30	216	do 29	Nov. 30	216	do 29	Nov. 30	216
May 1	Dec. 7	221	May 1	Dec. 7	221	May 1	Dec. 7	221
April 26	do 10	229	April 26	do 10	229	April 26	do 10	229
do 29	do 13	229	do 29	do 13	229	do 29	do 13	229
May 1	do 11	225	May 1	do 11	225	May 1	do 11	225
April 30			April 30			April 30		

APPENDIX No.

No. 2.—STATEMENT shewing the Opening and Closing of the Lachine, Beauharnois, Sault Ste. Marie Canals, St. Ours Lock,

YEARS.	WELLAND CANAL.			BURLINGTON BAY CANAL.			SAULT STE. MARIE.	
	Opened.	Closed.	No. of days open.	Opened.	Closed.	No. of days open.	Opened.	Closed.
1831	April 8	......	......	......	......	......	......	......
1832	May 15	......	......	......	......	......	......	......
1833	do 20	......	......	......	......	......	......	......
1834	April 10	Nov. 15	220	......	......	......	......	......
1835	May 1	......	......	......	......	......	......	......
1836	April 28	......	......	......	......	......	......	......
1837	May 5	......	......	......	......	......	......	......
1838	April 5	......	......	......	......	......	......	......
1839	......	......	......	......	......	......	......	......
1840	April 2	Dec. 1	244	......	......	......	......	......
1841	May 4	do 6	......	......	......	......	......	......
1842	......	......	......	......	Dec. 9	......	......	......
1843	......	Dec. 4	......	April 24	do 20	241	......	Nov. 17
1844	April 1	do 4	248	do 6	do 27	266	April 22	do 23
1845	May 7	Nov. 29	207	March 27	do 23	272	do 24	do 9
1846	April 3	Dec. 15	257	April 7	do 27	255	do 16	do 25
1847	do 14	do 9	240	do 10	do 25	260	May 9	do 26
1848	do 10	do 19	258	Feb. 28	do 25	302	April 26	do 23
1849	do 3	do 7	249	March 28	do 26	274	May 9	Dec. 4
1850	do 1	do 12	255	April 2	do 19	262	do 3	Nov. 17
1851	March 25	do 12	261	March 22	do 24	278	April 23	do 27
1852	April 13	do 14	245	April 22	do 31	254	May 3	do 23
1853	do 1	do 17	261	do 5	do 30	270	April 28	do 27
1854	do 3	do 4	......	do 4	do 18	258	do 28	do 29
1855	do 16	do 12	241	do 14	do 24	255	May 2	do 30
1856	do 26	do 13	232	do 21	do 18	242	do 3	do 15
1857	May 1	do 15	229	do 4	Jan. 31	303	do 8	Dec. 1
1858	April 7	do 7	245	March 29	do 10	288	do 3	Nov. 20
1859	do 1	do 8	252	do 15	Dec. 16	276	do 3	do 26
1860	do 1	do 6	250	do 12	do 15	278	April 25	do 29
1861	do 8	do 12	249	......	......	......	May 3	do 29
1862	do 15	do 15	244	April 18	do 21	247	April 27	Dec. 3
1863	do 13	do 13	244	do 11	do 24	257	do 28	do 1
1864	do 13	do 11	242	do 9	do 23	256	May 2	Nov. 26
1865	do 17	do 15	242	do 6	do 31	269	do 1	Dec. 3
1866	do 17	do 11	238	do 13	do 22	253	do 5	do 2
1867	do 23	......	......	......	......	......	......	......

47.—*Continued.*

Cornwall, Farran's Point, Rapide Plat, Galops, Welland, Burlington Bay and and Chambly Canal.—*Concluded.*

ST. OURS LOCK.			CHAMBLY CANAL.		
Opened.	Closed.	No. of days open.	Opened.	Closed.	No. of days open.
				Nov. 17	
			April 17	do 27	225
			do 21	do 25	219
			do 22	do 21	214
			May 18	do 29	196
			April 19		
			May 21	Dec. 1	195
April 14	Dec. 6	237	April 19	do 5	231
do 9	Nov. 22	228	May 20	Nov. 19	184
do 10	Dec. 13	248	April 28	Dec. 14	231
do 13	do 4	236	do 28	do 2	219
do 19	do 4	230	May 2	do 2	215
do 23	Nov. 30	222	do 2	Nov. 29	212
do 18	Dec. 2	229	April 28	Dec. 1	218
do 17	do 4	232	May 7	do 4	212
do 9	Nov. 19	225	April 27	Nov. 19	207
do 5	Dec. 3	243	do 15	Dec. 3	233
do 4	do 5	246	do 22	do 2	215
do 16	do 3	228	do 25	do 3	223
do 25	do 2	222	May 6	do 4	213
do 29	do 3	219	do 1	do 8	222
do 7	do 9	247	April 25	do 7	227
do 16	do 9	238	do 25	do 8	228
do 9	do 12	248	May 1	do 12	226
do 16			do 1	do 1	

APPENDIX No 47.—*Continued.*—No. 3.—STATEMENT shewing the Opening and

YEARS.	STE. ANNE LOCK. Opened.	STE. ANNE LOCK. Closed.	STE. ANNE LOCK. No. of days open.	CARILLON CANAL. Opened.	CARILLON CANAL. Closed.	CARILLON CANAL. No. of days open.	CHUTE A BLONDEAU CANAL. Opened.	CHUTE A BLONDEAU CANAL. Closed.	CHUTE A BLONDEAU CANAL. No. of days open.	GRENVILLE Opened.
1332.....	......	......	......	......	......	......	......	......	......	......
1833.....	......	......	......	......	......	......	......	......	......	......
1834.....	......	......	......	......	......	......	......	......	......	......
1835.....	......	......	......	......	......	......	......	......	......	......
1836.....	......	......	......	......	......	......	......	......	......	......
1837.....	......	......	......	......	......	......	......	......	......	......
1838.....	......	......	......	......	......	......	......	......	......	......
1839.....	......	......	......	......	......	......	......	......	......	......
1840.....	......	......	......	......	......	......	......	......	......	......
1841....	......	......	......	......	......	......	......	......	......	......
1842.....	......	......	......	......	......	......	......	......	......	......
1843.....	June 26.....	Nov. 27....	155..	......	......	......	......	......	......	......
1844.....	April 18.....	do 25.....	222..	......	......	......	......	......	......	......
1845.....	do 24.....	do 28.....	219..	......	......	......	......	......	......	......
1846.....	do 11.....	do 29.....	233..	......	......	......	......	......	......	......
1847.....	May 5.....	do 29.....	209..	......	......	......	......	......	......	......
1848.....	April 16.....	do 30.....	229..	......	......	......	......	......	......	......
1849.....	do 20.....	Dec. 6	231..	......	......	......	......	......	......	......
1850.....	do 29.....	do 5.....	221..	......	......	......	......	......	......	......
1851.....	do 17.....	Nov. 24.....	222..	......	......	......	......	......	......	......
1852.....	do 30.....	Dec. 15.....	230..	......	......	......	......	......	......	......
1853.....	do 24.....	Nov. 28.....	219..	......	......	......	......	......	......	......
1854.....	do 29.....	Dec. 2.....	218..	......	......	......	......	......	......	......
1855.....	do 30.....	Nov. 27.....	212..	......	......	......	......	......	......	......
1856.....	do 25.....	Dec. 1.....	221..	......	......	......	......	......	......	......
1857.....	do 25.....	do 4.....	224..	......	......	......	......	......	......	......
1858.....	do 19.....	Nov. 29.....	225..	......	......	......	......	......	......	......
1859.....	do 18.....	do 28.. ..	225..	April 29.....	Nov. 28....	214..	April 29.....	Nov. 28.....	214..	April 29........
1860.....	do 21.....	Dec. 2.....	226..	do 30.....	do 29.....	214..	do 30.....	do 29.....	214..	do 28........
1861.....	do 27.....	do 2.....	220..	May 3.....	do 29.....	210..	May 3.....	do 29.....	210..	May 3... ....
1862....	do 29.....	do 2.....	218..	do 3.....	do 30.....	212..	do 3.....	do 30.....	212..	do 3. ......
1863.....	do 28.....	do 5.....	222..	do 1.....	Dec. 2.....	217..	do 1.....	Dec. 2.....	217..	do 1........
1864.....	do 23.....	do 1.....	223..	do 2.....	Nov. 30.....	213..	do 2.....	Nov. 30.....	213..	do 2........
1865.....	do 12.....	do 5.....	238..	do 1.....	do 30.....	214..	do 1.....	do 30.....	214..	do 1.......
1866.....	do 25.....	do 6.....	226..	do 3.....	do 30.....	212..	do 3.....	do 30.....	212..	do 3........
1867.....	May 1.....	......	......	do 7.....	......	......	do 7.....	......	......	do 7........

RIDEAU

No. 4.—STATEMENT shewing the dates when the first and last vessel

YEARS.	Opened.	Closed.
1835..................	April 28..................	November 16..................
1836..................	May 10..................	do 15..................
1837..................	do 2..................	December 1..................
1838..................	do 2..................	November 19..................
1839..................	April 22..................	do 23..................
1840..................	do 22..................	do 24..................
1841..................	do 28..................	do 24..................
1842..................	do 23..................	do 25..................
1843..................	May 2..................	do 19..................
1844..................	April 24..................	do 23..................
1845..................	do 26..................	do 28..................
1846..................	do 27..................	do 25..................
1847..................	May 4..................	do 28..................
1848..................	April 17..................	do 30..................
1849..................	do 27..................	do 30..................
1850..................	May 1..................	December 2..................
1851..................	April 28..................	November 24..................

Closing of Ste. Anne Lock, Carillon, Chute à Blondeau, Grenville & Rideau Canals

Canal.		Rideau Canal.							
		Ottawa.		Jones' Falls.		Brewer's Upper Mills.		Kingston.	
Closed.	No. of days open.	Opened.	Closed.	Opened.	Closed.	Opened.	Closed.	Opened.	Closed.
		May 29	Nov. 14	July 30	Nov. 14				
		do 8	do 1	June 7	do 7				
		April 17	do 14	April 28	do 13				
		do 27	do 16	do 23	do 23				
		May 10	do 15	May 6	do 16	May 1	Nov. 20		
		do 2	Dec. 1	April 30	do 23	do 1	do 22		
		do 2	Nov. 19	do 25	do 24	do 1	do 23		
		April 22	do 23	do 29	do 24	do 1	do 24		
		do 22	do 24	do 23	do 22	do 1			
		do 28	do 24	do 30	do 24				
		do 23	do 25	do 22	do 26				
		May 2	do 27	do 29	do 29				
		April 24	do 23	do 22	do 23	May 1	Nov. 24		
		do 26	do 28	do 26	do 28	April 26	do 27		
		do 21	Dec. 2	do 19	do 30	do 19	Dec. 1		
		May 4	Nov. 28	May 1	do 29	May 5	Nov. 24		
		April 17	do 27	April 20	do 30	April 21	do 29	May 1	Nov. 30
		May 16	do 30	do 26	do 30	do 26	do 30	do 2	do 30
		do 3	Dec. 2	May 2	do 30	do 30	do 30	do 1	Dec. 1
		April 28	Nov. 24	April 26	do 12	do 26	do 17	April 25	Nov. 30
		May 4	do 24	May 1	do 23	May 3	do 23	May 1	do 30
		April 27	do 24	April 27	do 27	April 26	do 29	do 1	do 30
		May 1	do 22	do 27	do 29	do 28	do 29	do 1	do 30
		April 30	do 35	May 2	do 28	May 1	do 28	do 1	do 28
		May 1	do 27	do 1	do 28	do 1	do 28	do 1	do 28
		do 2	do 25	April 22	do 21	April 23	do 23	April 23	do 23
		do 2	do 21	May 1	do 19	May 1	do 16	May 1	do 22
Nov. 28	214	April 27	do 19	April 20	do 23	April 16	do 27	April 16	do 30
do 29	214	May 2	do 28	May 1	do 25	May 1	do 26	May 1	do 29
do 29	210	April 30	do 26	do 2	do 23	do 1	do 20	do 1	do 25
do 30	212	May 1	do 27	do 1	do 19	do 1	do 22	do 1	do 30
Dec. 2	217	do 1	do 28	do 4	do 26	do 2	do 27	do 1	do 30
Nov. 30	213	do 1	Dec. 2	do 1	do 29	April 27	do 28	April 27	do 30
do 30	214	April 27	do 4	April 24	do 30	do 24	do 29	do 25	Dec. 6
do 30	212	May 1	do 6	May 3	Dec. 2	May 1	Dec. 2	May 1	do 4
		do 4		do 4		do 4		do 4	

CANAL.

passed the Locks each season, from 1835 to 1866, inclusive.

Years.	Opened.	Closed.
1852	May 5	November 24.
1853	do 13	do 24.
1854	do 3	do 22.
1855	do 4	do 25.
1856	do 3	do 27.
1857	do 2	do 25.
1858	do 3	do 21.
1859	April 27	do 19.
1860	May 2	do 23.
1861	April 30	do 29.
1862	May 1	do 27.
1863	do 2	do 29.
1864	April 27	do 25.
1865	do 25	December 6.
1866	May 1	do 6.
1867	do 1	

APPENDIX No. 47.—*Concluded.*

No. 5.—ERIE CANAL.—The following table, taken from the Report of the Canal Commissioners of the State of New York, shews the date of Opening and Closing of the Hudson River; also, the time of Opening and Closing the Erie Canal, from 1824 to 1860, and the opening of Lake Erie, from 1827 to 1864.

OPENING AND CLOSING OF THE HUDSON RIVER.				COMMENCEMENT AND CLOSE OF NAVIGATION OF ERIE CANAL.			
River open.	Winter.	River closed.	Open days.	Canal opened.	Canal closed.	Navigable days.	Opening of the Lake.
March 3, 1824	1824–25	Jan. 5, 1825	309	April 30, 1824	Dec. 4	219	
do 6, 1825	1825–26	Dec. 13, 1825	283	do 12, 1825	do 5	238	
Feb. 25, 1826	1826–27	do 24, 1826	302	do 20, 1826	do 18	243	
March 20, 1827	1827–28	Nov. 25, 1827	251	do 22, 1827	do 18	241	April 21, 1827
Feb. 8, 1828	1828–29	Dec. 28, 1828	220	March 27, 1828	do 20	269	do 1, 1828
April 1, 1829	1829–30	Jan. 11, 1830	286	May 2, 1829	do 17	230	May 10, 1829
March 15, 1830	1830–31	Dec. 25, 1830	283	April 20, 1830	do 17	242	do 5, 1830
do 15, 1831	1831–32	do 6, 1831	263	do 16, 1831	do 1	230	do 8, 1831
do 25, 1832	1832–33	do 21, 1832	289	do 25, 1832	do 21	241	April 27, 1832
do 21, 1833	1833 34	do 13, 1833	277	do 19, 1833	do 12	238	do 23, 1833
Feb. 29, 1834	1834–35	do 15, 1834	291	do 17, 1834	do 12	240	do 6, 1834
March 25, 1835	1835–36	Nov. 30, 1835	268	do 15, 1835	Nov. 30	230	May 8, 1835
April 4, 1836	1836–37	Dec. 7, 1836	248	do 25, 1836	do 26	216	April 27, 1836
March 27, 1837	1837–38	do 14, 1837	261	do 20, 1837	Dec. 9	234	May 16, 1837
do 19, 1838	1838–39	Nov. 25, 1838	257	do 12, 1838	Nov. 25	228	Mar. 31, 1838
do 25, 1839	1839–40	Dec. 18, 1839	286	do 20, 1839	Dec. 16	241	April 11, 1839
Feb. 25, 1840	1840–41	do 5, 1840	285	do 20, 1840	do 3	228	do 27, 1840
March 24, 1841	1841–42	do 19, 1841	286	do 24, 1841	Nov. 30	221	do 14, 1841
Feb. 4, 1842	1842–43	Nov. 28, 1842	308	do 20, 1842	do 28	222	Mar. 7, 1842
April 13, 1843	1843–44	Dec. 10, 1843	242	May 1, 1843	do 30	214	May 6, 1843
March 18, 1844	1844–45	do 17, 1844	278	April 18, 1844	do 26	222	Mar. 14, 1844
Feb. 24, 1845	1845–46	do 3, 1845	283	do 15, 1845	do 29	228	April 3, 1845
March 18, 1846	1846–47	do 14, 1846	275	do 16, 1846	do 25	224	do 11, 1846
April 7, 1847	1847–48	Dec. 25, 1847	263	May 1, 1847	Nov. 30	214	April 23, 1847
March 22, 1848	1848–49	do 27, 1848	292	do 1, 1848	Dec. 9	223	do 9, 1848
do 19, 1849	1849–50	do 26, 1849	286	do 1, 1849	do 5	219	Mar. 25, 1849
do 10, 1850	1850–51	do 17, 1850	282	April 22, 1850	do 11	234	do 25, 1850
Feb. 25, 1851	1851–52	do 14, 1851	293	do 15, 1851	do 5	235	April 2, 1851
March 28, 1852	1852–53	do 22, 1852	270	do 20, 1852	do 16	239	do 20, 1852
do 23, 1853	1853–54	do 21, 1853	274	do 20, 1853	do 20	245	do 14, 1853
do 17, 1854	1854–55	do 8, 1854	266	May 1, 1854	do 3	217	do 29, 1854
do 27, 1855	1855–56	do 20, 1855	268	do 1, 1855	do 10	224	do 21, 1855
April 11, 1856	1856–57	do 14, 1856	248	do 5, 1856	do 4	214	May 2, 1856
Feb. 27, 1857	1857–58	do 27, 1857	303	do 6. 1857	do 15	223	April 27, 1857
March 20, 1858	1858–59	do 17, 1858	273	April 28, 1858	do 8	225	do 15, 1858
do 13, 1859	1859–60	do 10, 1859	273	do 15, 1859	do 12	242	do 7, 1859
do 6, 1860	1860–61	do 14, 1860	283	do 25, 1860	do 12	232	do 17, 1860
do 5, 1861	1861–62	do 23, 1861	294	May 1, 1861	do 10	224	do 13, 1861
April 4, 1862	1862–63	do 19, 1862	259	do 1, 1862	do 10	224	do 15, 1862
do 3, 1863	1863–64	do 11, 1863	253	do 1, 1863	do 9	223	do 3, 1863
March 11, 1864	1864–65	do 12, 1864	277	April 30, 1864	do 8	223	do 13, 1864

APPENDIX No. 48.

No. 1.—PORT OF QUEBEC.—STATEMENT of the Number of Vessels, and their aggregate Tonnage, which have arrived at Quebec from Sea, in each year, from 1764 to 1866, inclusive, distinguishing Steamers from Sailing Vessels, from the year 1831 to 1866, inclusive, and of Vessels engaged in the coasting trade from 1853 to 1866, inclusive, the number of men employed, &c.

Years.	No. of Vessels.	No. of Tons.	No. of Men.	Years.	No. of Vessels.	No. of Tons.	No. of Men.	REMARKS.
1764...	67	5,496	568	1798......	81	14,034	924	
1765...	52	4,814	456	1799......	125	16,163	1,569	
1766...	66	6,999	601	1800......	141	16,757	1,798	
1767...	70	5,157	517	1801......	175	20,517	1,564	
1768...	46	4,069	360	1802......	179	18,221	1,204	
1769...	82	7,411	587	1803......	167	28,744	1,530	
1770 ..	48	5,870	364	1804	165	22,804	1,107	
1771...	77	6,584	597	1805......	157	18,795	1,097	
1772...	62	5,313	494	1806......	167	16,756	1,008	
1773...	*	....	....	1807......	193	18,355	1,880	
1774...	......	....	....	1808......	334	70,275	3,220	
1775...	......	....	....	1809......	517	85,476	4,126	
1776...	......	....	....	1810.....	627	134,204	5,308	*The compiler unable to ascertain the precise number.
1777...	63	5,746	509	1111......	582	116,687	5,553	
1778...	*	....	....	1812......	399	86,196	3,950	
1779...	......	....	....	1813......	190	43,856	2,200	
1780...	......	....	....	1814......	173	31,092	1,456	
1781...	.....	....	....	1815......	184	35,922	1,794	
1782..	......	....	....	1816......	281	53,390	2,889	
1783...	69	8,792	724	1817......	332	77,715	3,629	
1784...	32	5,164	356	1818......	388	90,118	4,018	
1785...	58	8,834	586	1819......	645	150,122	6,965	
1786...	74	10,006	547	1820......	585	147,754	6,767	
1787...	*	....	....	1821....	434	102,786	4,645	
1788...	58	8,199	553	1822.....	612	145,953	6,450	
1789...	*	....	....	1823......	569	132,634	6,130	
1790...	50	8,566	461	1824......	619	150,000	8,047	
1791...	81	14,760	826	1825......	796	195,598	10,348	
1792...	163	12,361	659	1826......	714	179,949	9,282	
1793...	114	15,758	933	1827......	619	152,712	8,080	
1794...	113	22,129	1,274	1828......	718	183,472	9,340	
1795...	117	22,447	1,678	1829......	900	236,575	11,700	
1796...	67	11,050	890	1830......	896	227,275	11,648	
1797...	89	19,072	1,077					

Sailing Vessels and Steamers.

Years.	No. of Vessels.	No. of Tons.	No. of Men.	No. of Steamers.	No. of Tons.	No. of Men.	REMARKS.
1831...	1,026	263,160	13,329	1	363	21	The "Royal William" was the first steamer that crossed the Atlantic from this port.
1832...	944	260,708	12,264	1	363	21	
1833...	940	245,708	10,855	1	363	21	
1834...	1,089	295,550	12,828	....	....	....	
1835...	1,105	311,490	13,425	....	....	....	From the year 1834 to 1839, inclusive, no steamers crossed the Atlantic for this port.
1836...	1,152	344,406	14,445	....	....	....	
1837...	1,002	313,885	13,237	....	....	....	
1838...	1,026	333,133	13,552	....	....	....	
1839...	1,068	357,837	15,262	....	....	....	The "Unicorn" was the only steamer that navigated between this port and Nova Scotia from 1840 to 1844, inclusive.
1840...	1,247	427,839	16,691	8	3,112	136	
1841...	1,221	425,118	16,443	13	5,057	221	
1842...	861	295,370	11,316	11	4,279	187	
1843...	1,216	428,419	16,399	11	4,668	204	
1844...	1,220	446,474	16,494	12	4,668	204	
1845...	1,489	576,541	20,932	....	....	....	From the year 1845 to 1852, inclusive, no steamers crossed the Atlantic for this port.
1846...	1,480	568,225	20,614	....	....	....	
1847...	1,212	479,124	17,564	....	....	....	

APPENDIX No. 48.—*Continued.*

No. 1.—Sailing Vessels and Steamers.—*Concluded.*

YEARS.	No. of Vessels.	No. of Tons.	No. of Men.	No. of Steamers.	No. of Tons.	No. of Men.	REMARKS.
1848	1,188	452,436	16,423	....	....	....	
1849	1,184	465,088	16,571	....	....	....	
1850	1,196	465,804	16,092	....	....	....	
1851	1,300	533,427	17,753	....	....	....	
1852	1,234	506,123	16,636	....	....	....	This line of steamers came from Liverpool to this port for two years only, by contract.
1853	1,346	567,857	19,109	5	2,881	251	
1854	1,405	607,598	19,541	11	11,328	760	
1855	742	348,430	11,082	....	....	... .	
1856	988	460,561	14,650	18	16,599	1,127	The Montreal Ocean Steamers, the Glasgow Line of Steamers, the Government Tug Boats, and other steamers.
1857	1,259	588,352	18,556	24	21,092	1,382	
1858	979	481,720	14,886	28	19,933	1,570	
1859	912	462,305	13,740	58	48,679	3,306	
1860	1,191	616,199	17,807	61	50,759	3,492	
1861	1,277	703,908	19,339	67	71,894	4,335	
1862	1,054	549,773	15,759	78	72,025	4,612	
1863	1,384	738,023	20,755	64	59,881	3,993	
1864	1,161	637,209	17,356	61	61,045	3,810	
1865	1,133	671,145	17,411	72	75,851	4,420	
1866	1,041	590,120	15,695	73	75,611	4,552	

Coasting Trade Vessels below this Port, from 1853 to 1866 inclusive.

YEARS.	Vessels.	Tons.	Men.	Years.	Vessels.	Tons.	Men.	REMARKS.
1853	109	4,964	400	1860	177	12,934	1,160	No return of this trade was kept previous to the year 1853.
1854	91	4,343	337	1861	227	15,910	1,536	
1855	101	5,001	364	1862	215	9,997	882	
1856	162	6,126	490	1863	213	9,743	870	
1857	130	6,265	495	1864	203	10,203	822	
1858	146	9,372	866	1865	191	9,998	839	
1859	160	11,454	1,070	1866	186	10,033	707	

CUSTOM HOUSE,
Quebec, 16th February, 1867.

APPENDIX No. 48.—*Continued.*

No. 2.—Statement relative to the Vessels engaged in the Quebec Trade, shewing the Number of Voyages made, and the Number of Vessels Lost, for the respective years, from 1840 to 1849 inclusive.

YEARS.	VOYAGES.		Vessels lost.	Percentage of Loss of Vessels.
	Vessels.	Tons.		
1840	1314	449,085	19	1.446
1841	1263	438,849	19	1.504
1842	878	298,674	19	2.164
1843	1249	450,412	12	0.960
1844	1239	453,894	14	1.130
1845	1499	584,540	46	3.068
1846	1467	572,373	47	3.204
1847	1215	489,817	20	1.646
1848	1194	457,430	16	1.340
1849	1243	481,227	26	2.109

Remarks.—No means of ascertaining the number of vessels lost for the respective years from 1849 to 1867.

PORT OF QUEBEC.

No. 3.—RETURN of the Number of Vessels Inwards and Outwards at this Port, from 6th January, 1840, to 31st December, 1866.

	INWARDS.		OUTWARDS.	
YEARS.	Vessels.	Tons.	Vessels.	Tons.
1840	1,235	430,951	1,314	449,085
1841	1,234	430,175	1,263	438,849
1842	872	299,649	878	298,674
1843	1,228	443,087	1,249	450,412
1844	1,232	451,142	1,239	453,894
1845	1,489	576,541	1,499	584,540
1846	1,480	568,225	1,467	572,373
1847	1,210	479,124	1,215	489,817
1848	1,188	452,436	1,194	457,430
1849	1,184	465,088	1,243	481,227
1850	1,196	....	1,275	....
1851	1,300	....	1,394	....
1852	1,234	....	1,270	....
1853	1,351	....	1,406	....
1854	1,416	....	1,558	....
1855	750	....	853	....
1856	1,006	....	1,083	....
1857	1,283	....	1,355	....
1858	1,007	....	1,058	....
1859	970	....	1,051	....
1860	1,252	....	1,293	....
1861	1,571	....	1,534	....
1862	1,347	....	1,319	....
1863	1,661	....	1,785	....
1864	1,425	....	1,561	....
1865	1,396	....	1,517	....
1866	1,300	....	1,410	....

N. B.—The regular trading (sailing) vessels make, in each year, two voyages ; there are two or three sailing vessels that make three.

Custom House, Quebec.

No. 4.—PORT OF QUEBEC.—COMPARATIVE STATEMENT shewing the Number of from whence, Value of Cargo, and Duty paid, for the

1865.

No. of Vessels.	Cargo.	Ballast.	Tonnage	What Nation.	From whence.	Value of Cargo.	Amount of Duty.	REMARKS.
						$ cts.	$ cts.	
6	6	....	3,306	Norwegian	United Kingdom	6,322 00	....	Coals.
1	1	....	765	do	do	2,400 00	....	Salt.
4	4	....	2,474	Prussian	do	7,486 00	....	Coals.
1	1	....	1,049	American	do	2,400 00	....	Salt.
24	...	24	13,507	Norwegian	do	....	....	
2	...	2	2,746	American	do	....	....	
1	...	1	789	Swedish	do	....	....	
2	...	2	2,673	Bremen	do	....	....	
2	...	2	1,772	Hamburg	do	....	....	
1	1	....	282	Austrian	do	....	....	Proceeded to Montreal.
2	2	....	502	Norwegian	France	8,599 00	1,267 00	General cargo, one cargo gone to Montreal.
3	...	3	1,407	do	do	....	....	
2	...	2	2,148	American	United States	....	....	
1	...	1	336	Russian	do	....	....	
40	...	40	18,716	Norwegian	Norway	....	....	
1	...	1	452	Bremen	Bremen	....	....	
1	1	....	575	Norwegian	do	92,636 00	3,694 00	General cargo.
2	...	2	1,448	do	Hamburg	....	....	
2	...	2	1,772	Hamburg	do	....	....	
2	2	....	1,170	do	do	24,864 00	5,739 00	General cargo.
1	1	....	883	American	do	7,155 00	1,431 00	do part of cargo gone to Montreal.
4	...	4	2,191	Norwegian	Italy	....	....	
1	...	1	390	Prussian	do	....	....	
1	...	1	789	Swedish	do	....	....	
2	...	2	1,179	Norwegian	Belgium	....	....	
1	...	1	293	Prussian	do	....	....	
2	2	....	1,236	Norwegian	do	1,872 00	653 00	General cargo.
2	2	....	829	Prussian	do	7,355 00	4,733 00	do
1	...	1	429	Norwegian	Portugal	....	....	
1	1	....	412	do	do	800 00	....	Salt.
1	1	....	213	Austrian	do	5,856 00	1,187 00	General cargo, wine, &c.
4	4	....	1,020	Portuguese.	do	3,953 00	603 00	do part of cargo gone to Montreal.
10	...	10	4,953	Norwegian	Spain	....	....	
4	...	4	2,640	Russian	do	....	....	
1	...	1	435	Spanish	do	....	....	
1	...	1	519	Swedish	do	....	....	
2	...	2	1,202	Prussian	do	....	....	
1	1	....	452	Norwegian	do	17,276 00	3,395 00	General cargo.
2	2	....	726	do	do	1,040 00	....	Salt.
3	...	3	1,668	do	Holland	....	....	
1	1	....	256	Prussian	do	3,932 00	5,534 00	Cargo, gin, part of cargo gone to Montreal.
1	1	....	410	Spanish	Spanish W. Indies	11,063 00	3,888 00	Cargo of molasses, &c.
3	...	3	1,900	Norwegian	Gibraltar	....	....	
2	...	2	1,015	Prussian	do	....	....	
1	1	....	295	do	Sardinia	690 00	....	Salt.
2	...	2	1,226	Norwegian	Egypt	....	....	
2	2	....	846	do	British W. Indies	3,550 00	....	Coals.
1	...	1	617	Swedish	Malta	....	....	
1	...	1	466	Norwegian	do	....	....	
1	1	....	544	Swedish	Sweden	800 00	....	Coals.
1	...	1	813	do	do	....	....	
1	1	....	49	French	St. Pierre Miquelon	775 00	....	Fish, oil, &c.
1	1	....	179	Norwegian	Sicily	15,927 00	2,675 00	General cargo.
1	1	....	368	Hamburg	China	....	....	Proceeded to Montreal.
1	...	1	562	American	Africa	....	....	
1	1	....	73	Netherland	Greenland	....	....	In transitu to Kingston.
1	...	1	355	Prussian	Newfoundland	....	....	
167	42	125	70,125	....	....	226,751 00	34,799 00	

No. 48.—*Continued.*

Foreign Vessels arrived at this Port, with Cargo or Ballast, Tonnage, what Nation, years ended 31st December, 1865 and 1866.

1866.								
No. of Vessels.	Cargo.	Ballast.	Tonnage.	What Nation.	From whence.	Value of Cargo.	Amount of Duty.	REMARKS.
						$ cts.	$ cts.	
2	2	.....	851	Norwegian..	United Kingdom.....	26,612 00	5,883 00	General cargo.
6	6	.....	2,559	do ...	do	10,400 00		Salt.
2	2	.....	714	Prussia..	do	2,931 00		Coals.
3	3	.....	2,010	Norwegian..	do	3,094 00		do
1	1	.....	610	Bremen......	do	1,738 00		do
4	4	.....	1,602	Norwegian..	do			Proceeded to Montreal.
2	2	.....	893	Prussian.....	do			do
1	1	.....	152	Hanovarian	do			do
47	....	47	24,318	Nerwegian..	de			
1	....	1	465	Russian	do			
1	....	1	731	Prussian.....	do			
1	...	1	814	Italian.......	do			
1	1	.....	298	Norwegian..	France			do
1	1	....	264	Prussian.....	do			do
1	1	.....	677	French.......	do	1,242 00		Salt. [for Montreal.
3	3	.....	1,311	Norwegian .	do	16,383 00	4,005 00	General cargo, part of cargo
1	1	.....	424	French.......	do	5,013 00	39 00	Salt, bricks, &c.
4	...	4	1,476	Norwegian..	do			
1	...	1	616	Prussian.....	do			
2	2	.....	876	Norwegian..	United States.......			Proceeded to Montreal.
1	1	.....	67	American...	do			Working materials not landed.
1	...	1	657	Hamburg ...	do			
1	...	1	600	Danish......	do			
1	....	1	452	American ...	do			
1	...	1	616	Bremen......	do			
1	....	1	400	Norwegian..	do			
2	2	.....	1,495	do ...	Norway	4,013 00	20 00	Iron, coals, &c.
2	2	.....	853	do ...	do			Proceeded to Montreal.
62	...	62	34,706	do ...	do			
1	1	.....	780	Bremen......	Bremen	17,262 00	3,896 00	General cargo.
1	1	.....	372	Norwegian..	do	6,894 00	1,972 00	do
1	1	.. ..	324	Prussian.....	do	10,975 00	3,077 00	do
2	...	2	1,134	Norwegian..	do			
1	1	....	235	Mecklenb'g.	Hamburg	10,784 00	13,739 00	Cargo, (gin, &c.)
3	3	.....	1,694	Hamburg	do	10,371 00	2,318 00	General cargo.
1	1	.....	288	Norwegian..	do	110 00	74 00	do part of cargo gone
2	...	2	1,247	Hamburg ...	do			to Montreal.
1	...	1	800	Norwegian..	do			
3	...	3	1,804	do ...	Italy			
1	1	.....	400	Prussian.....	Belgium	7,784 00	1,594 00	General cargo.
1	1	.....	224	Norwegian..	Portugal	480 00		Salt. [to Montreal.
3	3	.....	416	Portuguese.	do	11,795 00	2,368 00	Wines, &c., part of cargo gone
1	1	....	184	Danish.......	Spain	925 00	139 00	Figs, lemons and raisins.
3	...	3	1,629	do ...	do			
2	...	2	770	Prussian.....	do			
3	...	3	2,094	Norwegian..	do			
1	1	.....	220	Danish.......	Holland	23,525 00	24,120 00	Cargo, (gin, &c.)
1	1	.....	142	American...	Spanish W. Indies..	7,585 00	3,904 00	Molasses.
1	...	1	517	Norwegian..	do			
1	...	1	694	Prussian.....	Gibraltar			
1	...	1	650	Norwegian..	Sardinia			
3	...	3	1,800	do ...	Egypt			
195	51	144	99,925			179,916 00	67,148 00	

Custom House,
Quebec, 22nd February, 1867.

APPENDIX No. 48.—*Continued.*

No. 5.—PORT OF MONTREAL.—STATEMENT shewing the dates of the Arrivals and Departure, tonnage, &c., of sea-going Vessels, for the following years.

YEARS.	First arrivals from Sea.	Last vessel for Sea.	Steamers.		Sailing vessels.		Lower Port vessels.		Sea-going vessels.		Greatest number in Port at one time.	
			No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	Total No.	Gross Tonnage.	Date of	Number.
1854	May 20	Nov. 23	6	5,545	174	58,416	78	6,949	258	70,910	Oct. 16	21
1855	" 9	" 20	6	5,545	90	38,463	107	9,721	197	48,154	June 14	30
1856	April 30	" 24	16	14,276	117	47,497	114	9,548	247	71,321	" 9	26
1857	May 1	" 23	9	7,541	123	51,795	95	8,404	227	67,740	" 13	26
1858	April 30	" 24	16	17,887	127	53,553	82	7,369	225	78,809	" 5	22
1859	May 3	" 20	35	43,704	118	43,705	77	7,251	230	94,660	" 3	23
1860	April 30	" 25	37	45,387	149	69,742	73	6,470	259	121,559	Oct. 7	35
1861	" 27	Dec. 4	40	51,298	433	202,601	101	7,894	574	261,793	June 6	117
1862	" 28	Nov. 27	53	62,912	430	195,348	88	6,983	571	265,243	Oct. 16	78
1863	May 6	" 26	54	56,460	369	144,585	81	8,179	504	209,242	June 13	86
1864	April 28	Dec. 7	51	59,071	237	94,202	90	8,628	378	161,901	" 23	32
1865	May 3	Nov. 24	63	78,051	182	63,740	113	11,152	358	152,943	Oct. 19	42
1866	" 1	" 28	70	75,474	273	111,257	173	19,044	516	205,775	June 13	91

(Signed), A. M. RUDOLF,
Harbor Master.

HARBOR MASTER'S OFFICE,
Montreal, 12th February, 1867.

APPENDIX No. 48.—*Continued.*

No. 6.—HARBOR OF MONTREAL.—STATEMENT of the Number of River Steamers and Sailing Vessels, with their tonnage, from the year 1851 to the year 1866, both inclusive; also, the greatest number in Port at one time, with their tonnage.

YEARS.	Greatest number of River Steamers in Port on one day.		Greatest number of River sailing craft in Port on one day.		Total number of River Steamers in Port in one year.		Total number of River sailing vessels in Port in one year.		Total number of all River craft in Port each year, and the gross Tonnage.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
1851	8	600	79	3,950	468	91,488	3,141	221,695	3,609	313,183
1852	10	760	82	4,100	409	33,706	3,700	300,898	4,109	334,604
1853	8	650	91	4,550	318	62,087	3,179	255,428	3,497	317,515
1854	13	975	76	3,800	571	111,263	3,047	244,866	3,618	356,129
1855	16	1,200	91	4,905	586	114,411	2,687	221,588	3,273	335,999
1856	16	1,357	150	6,750	531	102,634	2,780	221,639	3,311	324,293
1857	19	1,425	118	4,860	635	123,955	3,090	230,587	3,725	354,542
1858	17	1,275	117	4,820	867	169,274	3,257	264,872	4,124	434,146
1859	18	1,350	96	4,750	801	177,550	3,397	281,315	4,198	451,065
1860	23	1,725	137	5,850	909	144,742	3,568	253,410	4,558	398,152
1861	28	2,380	196	9,850	982	152,872	4,265	377,352	5,247	530,224
1862	29	2,593	164	6,949	882	181,427	3,993	342,564	4,875	523,991
1863	26	2,435	197	9,898	900	185,261	3,797	349,479	4,697	534,740
1864	27	2,521	220	10,387	826	161,961	3,683	277,096	4,509	439,057
1865	28	2,603	205	9,893	879	193,364	3,892	407,707	4,771	601,071
1866	28	2,709	240	12,589	1,067	196,330	4,016	417,349	5,083	613,679

(Signed), JOHN FERNS,
Wharfinger.

HARBOR OFFICE,
Montreal, 12th February, 1867.

APPENDIX No. 48.—*Continued.*

No. 7.—STATEMENT shewing the dates of the Arrivals and Departures of Ocean Vessels and River Steamers at the Ports of Quebec, Montreal, Kingston and Toronto, (furnished by the Collectors of Customs of the respective places).

Year.	PORT OF QUEBEC.				PORT OF MONTREAL.			PORT OF KINGSTON.				PORT OF TORONTO.			
	ARRIVALS.		Sailed for sea.	No. of days from first arrival to sailing of last vessel.	First Steamer for Quebec.	Last Steamer for Quebec.	Days of Navigation.	EARLIEST.		LATEST.		STEAMERS.		SAILING VESSELS.	
	From Montreal, Steamer.	From sea. Ship.						Arrivals.	Departures	Arrivals.	Departures	First arrival.	Last arrival.	First arrival.	Last arrival.
1830	April 17...	April 26...	Dec. 4 ..	232.......	......	......	.....	......	......	......	......	......	......	......	......
1831	do 21...	do 16...	Nov. 30...	229.......	......	......	.....	......	......	......	......	......	......	......	......
1832	do 29...	May 4...	do 30...	216.......	......	......	.....	......	......	......	......	......	......	......	......
1833	do 18...	do 10...	do 25...	222.......	......	......	.....	......	......	......	......	......	......	......	......
1834	do 18...	do 6...	do 24...	221.......	......	......	.....	......	......	......	......	......	......	......	......
1835	May 4...	do 2...	do 26...	209.......	......	......	.....	......	......	......	......	......	......	......	......
1836	do 11...	do 11...	do 25...	199.......	......	......	.....	......	......	......	......	......	......	......	......
1837	do 1...	April 29...	do 18...	204.......	......	......	.....	......	......	......	......	......	......	......	......
1838	April 28...	May 3...	do 20...	207.......	......	......	.....	......	......	......	......	......	......	......	......
1839	do 21...	do 8...	do 23...	217.......	......	......	.....	......	......	......	......	......	......	......	......
1840	do 19...	April 25...	do 29...	225.......	......	......	.....	......	......	......	......	......	......	......	......
1841	May 1...	do 29...	do 28...	214.......	......	......	.....	......	......	......	......	......	......	......	......
1842	April 21...	May 3...	do 28...	222.......	......	......	.....	......	......	......	......	......	......	......	......
1843	May 5...	April 18...	do 28...	225.......	......	......	.....	......	......	......	......	......	......	......	......
1844	April 23...	May 3..	do 23...	215.......	......	......	.....	......	......	......	......	......	......	......	......
1845	do 25...	do 1..	do 26...	216.......	......	......	.....	......	......	......	......	......	......	......	......
1846	do 17...	April 24...	do 27...	225.......	......	......	.....	......	......	......	......	......	......	......	......
1847	May 8...	May 8...	do 26...	202.......	......	......	.....	......	......	......	......	......	......	......	......
1848	April 6...	do 1...	do 21...	230.......	......	......	.....	......	......	......	......	......	......	......	......
1849	do 25...	April 28...	do 25...	215.......	......	......	.....	......	......	......	......	......	......	......	......
1850	do 25...	do 28...	do 28...	218.......	......	......	.....	......	......	......	......	......	......	......	......
1851	do 22...	do 20...	do 29...	222.......	April 21...	Nov. 30...	224	......	......	......	......	......	......	......	......
1852	do 30...	do 15...	Dec. 4...	219.......	do 28...	Dec. 13...	230	......	......	......	......	Jan. 31...	Dec. 31...	Feb. 19...	Dec. 31

1853	do 23...	do 24...	Nov. 26..	218........	do 20...	do 1...	226	....	....	....	....	do 1...	do 31...	April 13...	do 29
1854	May 5...	do 29...	do 29...	208........	May 1...	do 2...	216	....	....	....	....	do 2...	do 30...	Mar. 13...	do 31
1855	do 6...	May 6...	do 22...	200........	do 5...	Nov. 22...	201	....	....	....	....	do 1...	do 31...	Jan. 4...	do 17
1856	April 27...	April 28...	do 23...	211	April 29...	do 25...	211	....	....	....	....	do 2...	do 3..	April 14...	do 6
1857	do 17...	do 20...	do 24...	222........	do 29...	Dec. 5...	215	....	....	....	....	April 1...	do 11...	Feb. 28...	do 10
1858	do 18...	do 28...	do 25...	222...	do 16...	Nov. 30...	229	....	....	....	....	do 1...	do 4...	March 5...	do 6
1859	do 22...	do 29...	do 28...	221........	do 12...	do 26...	229	....	....	....	....	do 1...	do 9...	Jan. 1...	do 7
1860	do 26...	do 28...	do 26...	215........	do 16...	Dec. 2...	231	....	....	....	....	March 20...	do 4...	do 11...	do 14
1861	do 26...	do 22...	Dec. 2...	221.... ...	do 26...	do 2...	221	May 1...	May 2...	Nov. 30...	Nov. 25...	April 11...	do 9...	Mar. 23...	do 17
1862	do 30...	do 16...	Nov. 29...	228........	do 29...	Nov. 29...	215	do 10...	April 26...	do 29...	do 29...	do 7...	do 1...	Jan. 6...	do 16
1863	May 3...	May 4...	do 27...	209........	May 2...	do 30...	213	do 6...	May 1...	Dec. 7...	do 19...	do 17...	do 3...	do 1...	do 8
1864	April 21...	April 27...	do 30...	224........	April 28...	do 29...	214	April 29...	April 18...	do 9...	do 24...	do 14...	do 9...	Mar. 14...	do 3
1865	do 21...	do 29...	do 28...	222........	do 21...	Dec. 1...	225	May 2...	do 27...	do 8 ..	Dec. 6...	March 27...	do 15...	do 25...	do 12
1866	do 27...	do 28...	Dec. 1...	219........	do 26...	Nov. 30...	218	do 3...	do 29...	do 5...	do 6...	April 12...	do 14...	Jan. 1..	do 19
1867	....	....	....	....	....	....	....	do 3...	do 27...	....	....	do 13...	....	Mar. 30...	....

(No. 84,583.)

APPENDIX No. 48—*Continued.*

No. 8.—LACHINE CANAL.—STATEMENT shewing the Number and Class of Vessels and Freight which passed downwards through the Lachine Canal, during the following mentioned years.

YEARS.	200 Tons and under. (Trips.)			200 to 300 Tons. (Trips.)			300 to 400 Tons. (Trips.)			Total number of Trips.			Freight.				Vessels passed through Lock No. 1.									Total number of Trips.		
																	200 Tons and under.			300 to 400 Tons.			200 to 300 Tons.					
	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Grain. Bushels.	Flour. Barrels.	Other Freight—Tons.	Firewo'd No. of Cords.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.
1858	586	196	2,946	71	57	123	...	...	42	657	233	3,111	2,583,039	607,820	256,994	61,224	......	......	....	......	......	......	...	...	......	......	......	....
1859	598	269	2,954	74	62	172	...	..	28	672	311	3,154	1,242,330	521,874	308,103	69,184	......	......	....	......	......	......	...	...	......	......	......	....
1860	623	307	2,966	60	40	218	...	...	39	683	347	3,223	4,741,294	636,327	327,424	62,223	145	40	2082	4	54	98	...	...	16	149	94	2,196
1861	732	308	3,645	50	79	248	...	...	54	782	387	3,947	9,782,643	768,119	353,291	64,091	162	48	2638	16	8	232	...	...	32	178	56	2,902
1862	649	275	3,660	43	66	162	...	9	124	692	350	3,946	8,201,551	770,994	237,367	64,458	200	35	2180	12	8	138	...	...	74	212	43	2,392
1863	678	251	3,892	58	81	183	..	14	140	736	346	4,215	5,627,464	697,860	226,142	69,562	282	41	2606	15	11	126	...	...	69	297	52	2,801
1864	775	255	3,457	62	91	152	...	28	129	837	374	3,738	3,502,685	475,953	197,665	64,702	321	49	3249	22	17	118	...	...	54	343	66	3,421
1865	855	216	4,012	78	74	169	...	34	147	933	324	4,328	3,162,752	459,001	260,979	78,238	298	32	3012	19	18	121	...	8	62	317	58	3,195
1866	909	249	3,558	69	86	172	...	41	136	978	376	3,866	2,843,361	427,125	281,250	72,967	341	45	2869	25	20	128	...	14	71	366	79	3,068

MONTREAL, 19th February, 1867.

(Signed,) ALFRED GOUGH, *Collector.*

(No. 84,583.)

APPENDIX No. 48.—*Continued.*

No. 8.—*Continued.*—LACHINE CANAL.—Statement shewing the Number and Class of Vessels and Freight which passed upwards through the Lachine Canal during the following mentioned years.

	200 Tons and under. (Trips.)			200 to 300 Tons. (Trips.)			300 to 400 Tons. (Trips.)			Total number of Trips.			Total Tons of Freight.	Vessels passed through Lock No. 1.									Total number of Trips.		
														200 Tons and under. (Trips.)			200 to 300 Tons. (Trips.)			300 to 400 Tons. (Trips.)					
Years.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.		Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.	Steamers.	Propellers.	Sailing Vessels.
1858	594	194	3,046	77	36	159	......	......	54	671	230	3,259	112,454	......	......	......	......	......	......	......	......	......	......	......	......
1859	606	262	3,182	79	40	220	......	......	33	685	302	3,435	136,780	......	......	......	......	......	......	......	......	......	......	......	......
1860	639	302	3,216	67	34	228	......	......	47	706	336	3,491	117,597	452	44	1,766	8	63	90	......	......	7	460	107	1,863
1861	756	285	4,081	56	73	262	......	......	56	812	358	4,399	120,060	417	50	2,102	11	9	216	......	......	35	428	59	2,353
1862	655	269	4,208	47	69	168	......	9	126	702	347	4,502	141,466	519	42	2,204	14	10	135	......	......	69	533	52	2,408
1863	704	230	4,038	61	58	192	......	14	134	765	302	4,364	129,349	553	36	2,710	17	14	139	......	......	76	570	50	2,926
1864	784	246	3,647	67	81	162	......	29	132	851	356	3,941	123,900	562	44	3,201	19	15	114	......	......	56	581	59	3,371
1865	799	223	4,131	80	78	167	......	33	141	879	334	4,439	145,723	681	28	3,070	18	16	124	......	7	60	699	51	3,254
1866	916	258	3,952	75	83	168	......	41	138	991	382	4,258	136,552	742	45	2,994	25	22	132	......	15	73	767	82	3,199

(Signed,) ALFRED GOUGH,
Collector.

Montreal, 19th February, 1867.

(No. 84,583.) APPENDIX No. 48.—*Continued.*

No. 9.—BEAUHARNOIS CANAL—Statement showing the Number of Vessels which passed through the Beauharnois Canal, during the following years.

Year.	Vessels with passes from Montreal.	Vessels obtaining passes at Beauharnois.	Total.
1859	2,337	352	2,689
1860	2,904	197	3,101
1861	4,679	182	4,861
1862	5,406	242	5,648
1863	4,454	283	4,737
1864	2,906	215	3,121
1865	2,900	179	3,079
1866	3,020	193	3,213

Lachine Canal Office, (Signed,) GEORGE ELLIS,
Montreal, 25th February, 1867. *Collector of Tolls.*

APPENDIX No. 48.—*Continued.*

No. 10.—CORNWALL CANAL—Statement furnished by the Collector, shewing the Number of Vessels which passed through the Cornwall Canal, during the following years:—

1859.

Description of Vessel.	Under 200 Tons.		Over 200 and under 300 Tons.		Over 300 and under 400 Tons.		Over 400 Tons.		Number of vessels.		Total both ways.
	Up.	Down.	Up	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Steamers	387	37	74	1	....	....	....	....	461	38	499
Propellers	49	45	26	25	1	1	....	....	76	71	147
Sailing Vessels	345	288	42	37	7	25	....	1	394	351	745
Total	781	370	142	63	8	26	....	1	931	460	1391

1860.

Steamers	412	60	88	17	....	....	....	....	500	77	577
Propellers	70	72	52	50	....	1	....	....	122	123	245
Sailing Vessels	501	452	113	113	13	17	....	1	627	583	1210
Total	983	584	253	180	13	18	....	1	1249	783	2032

1861.

Steamers	460	106	83	4	....	....	....	....	552	110	662
Propellers	97	102	58	52	1	1	....	....	156	155	311
Sailing Vessels	1101	1056	161	166	26	21	....	1	1288	1244	2532
Total	1667	1264	302	222	27	22	....	1	1996	1509	3505

(No. 1,202.) APPENDIX No 48.—*Continued.*

No. 10.—CORNWALL CANAL—Statement furnished by the Collector, shewing the number of Vessels which passed through the Cornwall Canal, during the following years.—*Concluded.*

1862.

Description of Vessels.	Under 200 Tons.		Over 200 and under 300 Tons.		Over 300 and under 400 Tons.		Over 400 Tons.		Number of Vessels.		Total both ways.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	
Steamers	455	156	79	3	20	....	....	....	554	159	713
Propellers	80	81	55	60	1	4	....	....	136	145	281
Sailing Vessels	1,229	1,087	152	131	33	48	....	....	1,414	1,266	2,680
Total	1,764	1,324	286	194	54	52	....	....	2,104	1,570	3,674

1863.

Steamers	433	94	53	13	....	....	....	....	486	107	593
Propellers	92	106	82	83	15	22	....	....	189	211	400
Sailing Vessels	615	600	143	128	34	54	14	17	806	799	1,605
Total	1,140	800	278	224	49	76	14	17	1,481	1,117	2,598

1864.

Steamers	411	54	42	4	....	....	....	....	453	58	511
Propellers	76	83	83	78	14	18	10	9	183	188	371
Sailing Vessels	485	471	114	111	27	35	12	14	638	631	1,269
Total	972	608	239	193	41	53	22	23	1,274	877	2,151

1865.

Steamers	389	57	24	3	....	....	....	....	413	60	473
Propellers	75	75	70	70	24	28	10	3	179	176	355
Sailing Vessels	528	525	111	110	30	31	16	24	685	690	1,375
Total	992	657	205	183	54	59	26	27	1,277	926	2,203

1866.

Steamers	389	60	44	15	....	....	....	....	433	75	508
Propellers	75	88	80	75	40	46	1	....	196	209	405
Sailing Vessels	427	436	112	85	23	25	8	12	570	558	1,128
Total	891	584	236	175	63	71	9	12	1,199	842	2,041

Cornwall Canal Office,
October 10th, 1867.

(Signed,) JAMES PHELAN,
Collector of Tolls.

APPENDIX No. 48.—*Continued.*

(No. 1,295.)

No. 11.—WILLIAMSBURGH CANALS.—Statement shewing the Number of Vessels and their aggregate Freight which passed through the Williamsburgh Canals, and for which passes were issued from the Canal Office at Edwardsburgh, during the following years.

Years.	VESSELS.	Upward bound Vessels.						Downward bound Vessels.						Total, up and down	
		100 tons and under.	200 tons and under.	300 tons and under.	400 tons and under.	Total. No. of Vessels.	Total. Freight—Tons.	100 tons and under.	200 tons and under.	300 tons and under.	400 tons and under.	Total. No. of Vessels.	Total. Freight—Tons.	No. of Vessels.	Freight—Tons.
1861...	Steamers............	......	......	......	......	......	....	......	....	......	......	......	....	....	....
do ...	Sailing Vessels......	33	7	3	1	44	945	23	8	3	......	34	3,491	78	4,436
1862...	Steamers	......	......	......	......	......	....	.....	......	......	......	.....	....	....	....
do ...	Sailing Vessels.....	51	10	1	1	63	2,156	38	11	2	1	52	3,729	115	5,885
1863...	Steamers.......	7	3	1	1	11	....	5	1	1	......	7	....	18	....
do ...	Sailing Vessels......	84	9	......	1	94	2,978	70	7	......	......	77	964	171	3,942
1864...	Steamers.......	34	4	5	......	43	....	18	7	5	......	30	....	73	....
do ...	Sailing Vessels......	90	3	2	......	95	6,241	68	1	2	......	71	1,463	166	7,704
1865...	Steamers......	77	11	2	......	90	....	17	3	.....	......	20	....	110	....
do ...	Sailing Vessels......	97	11	1	......	110	6,580	55	14	2	1	72	4,732	182	11,312
1866...	Steamers.	39	2	2	......	41	....	24	......	......	......	24	....	....	....
do ...	Sailing Vessels......	86	4	......	......	90	5,234	71	15	......	......	86	5,640	176	10,874

(Signed,) ISAAC N. ROSE,
Superintendent.

Morrisburgh, 10th Oct., 1867.

[No. 1410.] APPENDIX No.

No. 12.—WELLAND CANAL.—STATEMENT shewing the Number of Trips made
passed through and on the Welland

YEARS.	*	Steamers, Paddle and Propellers.		Sailing and other Vessels.		Flour.		Corn and Meal.		Oats and Meal.	
		No.	Tonnage	No.	Tonnage.	Barrels.	Tons.	Bushels.	Tons.	Bushels.	Tons.
1854......	C.	690	57,396	2,691	327,111	360,198	40,022	4,085,820	113,495	584,304	10,434
	A.	379	114,777	2,103	448,454						
Totals.	...	1,069	172,173	4,794	775,565						
1855......	C.	1,069	91,948	3,211	413,124	250,452	27,828	4,151,278	115,313	323,456	5,776
	A.	355	105,931	2,144	440,464						
Totals.	...	1,424	197,879	5,355	853,588						
1856......	C.	1,142	99,250	2,789	353,405	318,300	38,700	5,055,696	140,436	452,008	8,073
	A.	417	107,462	2,418	619,129						
Totals.	...	1,559	206,712	5,207	972,534						
1857......	C.	377	44,274	2,667	374,710	377,541	41,949	2,872,440	79,790	96,264	1,719
	A.	1,006	180,484	2,189	548,966						
Totals.	...	1,383	224,758	4,856	923,676						
1858......	C.	230	25,335	2,298	335,559	399,024	44,336	3,688,920	102,470	566,888	10,123
	A.	823	145,277	2,349	642,600						
Totals.	...	1,056	170,612	4,647	978,159						
1859......	C.	159	27,043	2,026	291,126	337,446	37,494	1,600,640	35,900	142,576	2,546
	A.	857	136,892	1,487	401,857						
Totals.	...	1,046	163,935	3,513	692,983						
1860......	C.	555	69,439	2,249	311,620	393,642	43,738	5,020,020	139,445	139,720	2,495
	A.	930	151,248	3,604	706,202						
Totals.	...	1,485	220,687	4,853	1,017,822						
1861......	C.	576	55,137	2,540	381,356	528,933	58,737	5,642,820	156,745	86,800	1,550
	A.	874	179,456	2,718	711,723						
Totals.	...	1,450	234,593	5,258	1,093,079						
1862......	C.	417	63,556	2,938	447,799	715,555	68,395	1,335,564	162,099	208,096	3,716
	A.	1,053	192,962	2,871	772,525						
Totals.	...	1,470	256,518	5,809	1,220,324						
1863......	C.	530	79,023	2,895	442,795	680,526	75,614	3,629,566	100,821	5,152	92
	A.	1,335	195,261	2,139	613,028						
Totals.	...	1,865	274,284	5,034	1,055,823						
1864......	C.	289	37,095	957	161,187	257,391	27,599	497,052	13,807	8,400	150
	A.	372	63,564	651	184,260						
Totals.	...	661	100,659	1,608	345,447						
1865......	C.	999	127,392	2,842	466,169	499,626	55,514	2,155,572	59,877	912,576	16,296
	A.	1,101	183,580	1,405	358,665						
Totals.	...	2,100	310,972	4,247	824,834						
1866......	C.	915	111,471	2,755	443,165	447,237	49,693	4,476,996	124,361	945,224	16,879
	A.	937	181,632	1,542	341,046						
Totals.	...	1,852	293,103	4,297	784,211						
1867......	C.	733	98,395	2,360	394,444	255,195	28,355	5,190,048	144,168	624,960	11,160
	A.	819	181,492	1,393	319,607						
Totals.	...	1,552	259,887	3,753	714,051						

NOTE.—The column with * at top, viz:—Letter C. denotes Canadian—A. American Vessels.

48.—*Continued.*

by Steamers, Sailing and other Vessels, also their Freight, in eight classes, which Canal during the undermentioned years.

Rye.		Wheat.		Firewood.		Saw Logs.		Merchandize & other Freight.	Total Freight.	REMARKS.
Bushels.	Tons.	Bushels.	Tons.	Cords.	Tons.	Number.	Tons.	Tons.	In tons.	
4,524	134	2,539,713	76,961	12,225	36,764	23,182	20,606	468,794	767,210	Ended 31st December.
32,184	894	5,495,160	166,520	20,441	61,323	26,218	28,305	448,374	849,333	Ended 31st December.
124,488	3,458	7,542,121	227,337	22,972	68,915	19,262	17,122	472,515	976,556	Ended 31st December.
4,032	112	7,034,742	213,174	22,921	68,763	19,107	16,984	478,581	901,072	Ended 31st December.
12,920	345	8,116,482	245,954	21,418	64,255	20,721	18,917	368,712	855,112	Ended 31st December.
5,220	145	5,249,541	159,077	15,434	46,302	10,627	9,446	418,611	709,611	Ended 31st December.
11,008	278	9,055,365	274,405	18,027	54,081	18,029	16,026	423,316	944,086	Ended 31st December.
83,160	2,310	11,996,358	313,526	22,883	68,648	19,890	17,680	351,287	1,020,483	Ended 31st December.
158,220	4,395	15,835,149	479,853	33,292	99,877	21,077	18,735	406,704	1,243,774	Ended 31st December.
87,408	2,428	12,216,402	370,194	38,324	114,973	8,652	7,691	469,307	1,141,120	Ended 31st December.
2,016	56	3,347,454	101,438	9,605	28,816	9,160	8,142	142,325	322,343	Fiscal 6 months, ended 30th June.
133,848	3,718	7,424,406	224,982	39,617	118,852	21,486	18,210	383,427	868,078	Fiscal year ended 30th June.
70,164	1,949	7,499,019	227,243	48,213	144,639	23,010	20,453	416,300	1,001,517	Fiscal year ended 30th June.
71,496	1,986	5,087,709	154,173	37,735	113,206	35,352	31,424	203,788	933,260	Fiscal year ended 30th June.

CUSTOMS DEPARTMENT, (Signed,) R. S. M. BOUCHETTE.
Ottawa, 28th October, 1867.

(No. 1,345.) APPENDIX No. 48.—*Continued.*

No. 13.—St. OURS LOCK.—Statement shewing the Number of Vessels and their aggregate freight, which passed through the St. Ours Lock, during the following years.

Year.	Upward Bound Vessels.			Downward bound Vessels.			Amount of Tolls.
	Steamers.	Sailing and other Vessels.	Freight in Tons.	Steamers.	Sailing and other Vessels.	Freight in Tons.	$ cts.
1860	186	62	3,454	187	61	3,867	365 86
1861	121	71	4,672	110	48	3,306	328 82
1862	135	24	1,686	129	29	1,962	217 87
1863	213	31	4,120	213	38	821	327 34
1864	187	31	2,843	177	26	1,384	287 01
1865	220	45	3,832	218	56	2,315	381 92
1866	254	47	3,084	246	41	3,318	430 49

The above is only the River business; no record being kept of any vessels that passed through the Chambly Canal.

(Signed,) JULES LEBŒUF,
Collector of Tolls.

St. Ours, Lock, 17th October, 1867.

(No. 84,583.)

No. 14.—CHAMBLY CANAL.—Statement shewing the number of Vessels, and their aggregate freight, which passed through the Chambly Canal, during the following years.

Year.	Vessels.	Upward bound Vessels, &c.					Downward bound Vessels, &c.					Totals up and down.		Aggregate amount of Tolls collected.
		80 Tons and under.	From 80 to 150 Tons.	From 150 to 250.	Totals. No. of Vessels.	Totals. Freight, Tons.	80 Tons & under	From 80 to 150 Tons.	From 150 to 250	Totals. No. of Vessels.	Totals. Freight, Tons.	No. of Vessels.	Freight, Tons.	$ cts.
1859	Steamers........	91	....	...	91	....	91	....	...	91	....	182	... .	....
"	Sailing Vessels	905	368	4	1,277	123,103	896	353	6	1,255	30,871	2,532	153,974	14,922 82
1860	Steamers........	101	....	...	101	....	101	....	...	101	35,497	202	....	....
"	Sailing Vessels	1,049	447	5	1,501	158,400½	1,115	411	8	1,534	....	2,035	193,897½	17,537 20
1861	Steamers........	38	....	...	38	....	41	....	...	41	....	79	....	....
"	Sailing Vessels	684	128	...	812	70,377½	729	148	...	877	35,800	1,689	106,177½	9,401 38
1862	Steamers........	49	....	...	49	50,146½	53	....	...	53	....	102	....	....
"	Sailing Vessels	780	272	...	1,052	....	827	209	11	1,047	28,722	2,099	78 868½	11,914 59
1863	Steamers........	83	....	...	83	....	89	....	...	89	....	172	....	....
"	Sailing Vessels	1,114	437	30	1,581	353,817	930	578	26	1,534	29,837	3,115	383,654	23,562 30
1864	Steamers.......	69	....	...	69	....	71	....	...	71	....	140	....	....
"	Sailing Vessels	837	525	75	1,437	161,624½	897	524	78	1,499	36,236½	2,936	197,861	21,654 10
1865	Steamers.......	111	... . ..	...	111	....	107	....	...	107	....	218	....	....
"	Sailing Vessels	1,256	869	73	2,198	303,366½	1,113	882	72	2,067	26,257½	4,265	329,624	27,496 21
1866	Steamers........	136	....	...	136	....	135	.. ..	...	135	....	271	....	....
"	Sailing Vessels	966	1,065	80	2,111	335,559	1,000	1,069	67	2,136	47,712	4,247	383,271	31,151 23

Lachine Canal Office,
Montreal, 25th February, 1867.

(Signed,) JOHN BRENNAN,
Collector of Canal Tolls

APPENDIX No. 48.—*Continued.*

(No. 84,583.)

No. 15.—STE. ANNE LOCK, OTTAWA RIVER.—STATEMENT shewing the Number of Vessels and their aggregate Freight, which passed through the Ste. Anne Lock, during the following years.

YEARS.	UPWARD BOUND VESSELS, &C.			DOWNWARD BOUND VESSELS, &C.			Amount of Tolls.
	Steamers.	Sailing and other vessels.	Freight in Tons.	Steamers.	Sailing and other vessels.	Freight in Tons.	
							$ cts.
1855	410	1,048	10,813	411	1,005	3,595½	4,389 22
1856	423	954	13,101½	362	826	4,069	5,058 71
1857	436	1,058	10,412½	360	995	3,368	4,549 38
1858	393	1,114	11,816	348	1,067	4,425	4,905 73
1859	447	1,238	13,669	403	1,157	4,598	5,654 17
1860	486	1,433	14,589	435	1,341	5,139	6,687 02
1861	494	1,397	15,081	437	1,322	4,176	6,328 03
1862	478	1,500	11,887	445	1,577	4,218½	6,944 68
1863	554	1,956	13,553	527	2,004	226,814	5,013 64
1864	605	1,951	14,966	532	1,762	193,473	4,657 37
1865	631	2,442	14,657	582	2,240	275,326	6,204 85
1866	698	2,555	18,763	656	2,418	303,964	6,927 88

N.B.—I beg to remark that since 1862 square and flatted timber, sawed lumber and firewood are included in the freight in tons.

(Signed,) JOHN BARRETT, *Collector of Tolls.*

APPENDIX No. 48.—*Continued.*

(No. 1,345.)

No. 16.—CARILLON AND GRENVILLE CANALS.—STATEMENT shewing the Number of Vessels, Tonnage and Freight which passed through the Carillon and Grenville Canals, during the following years.

YEARS.	UPWARD BOUND VESSELS.						DOWNWARD BOUND VESSELS.						Total Amount of Tolls collected.
	Steamers.	Tonnage.	Sailing Vessels.	Tonnage.	Freight, Tons.	Amount of Tolls collected.	Steamers.	Tonnage.	Sailing Vessels.	Tonnage.	Freight, Tons.	Amount of Tolls collected.	
						$ cts.						$ cts.	$ cts.
1864	282	10,690	1,567	112,458	12,150	2,110 04	No record kept					5,493 24	7,603 28
1865	264	9,789	1,993	150,102	13,888	1,818 73	do do					6,151 16	7,969 89
1866	336	12,222	2,172	162,235	15,208	1,965 47	336	12,338	2,092	160,353	418,912	6,825 32	8,790 79

CARILLON CANAL OFFICE,
19th October, 1867.

(Signed,) GEORGE T. FORBES,
Collector, Carillon.

" HUGH CUMMING,
Collector, Grenville.

APPENDIX No. 48.—*Continued.*

(No. 1,548.)

No. 17.—RIDEAU CANAL.—STATEMENT shewing the Number of Vessels and their aggregate Freight, which passed through the Rideau Canal, during the following years.

YEARS.	UPWARD BOUND VESSELS, &c.			DOWNWARD BOUND VESSELS, &c.			Amount of Tolls.
	Steamers.	Sailing and other vessels.	Freight in Tons.	Steamers.	Sailing and other vessels.	Freight in Tons.	$ cts.
1864	221	298	13,789	140	287	34,824	2,771 29
1865	217	268	10,182	141	710	27,670	2,014 87
1866	265	287	13,662	172	311	37,923	2,664 94

OTTAWA, November, 1867.

(Signed), J. D. SLATER,
Superintendent.

APPENDIX No. 48.—*Concluded.*

(No. 1,548.)

No. 18.—RIDEAU CANAL.—STATEMENT shewing the Number of Vessels and their aggregate Freight, which passed through the Rideau Canal, at Kingston Mills, during the following years.

YEARS.	UPWARD BOUND VESSELS, &c.			DOWNWARD BOUND VESSELS, &c.			Amount of Tolls.
	Steamers.	Sailing and other vessels.	Freight in Tons.	Steamers.	Sailing and other vessels.	Freight in Tons.	$ cts.
1864	70	1,361	185,874	150	1,437	69,640	5,202 16
1865	107	1,274	195,382	196	1,347	73,638	3,578 81
1866	134	1,198	193,342	250	1,277	73,498	3,774 02

(Signed), JAMES D. SLATER,
Superintendent.

APPENDIX No. 49.

(No. 84,740.)

COMPARATIVE charges in Quebec and New York, on a Vessel of 700 Tons, drawing 15 feet Inwards and 18 feet Outwards.

QUEBEC.		NEW YORK.	
FOR A VESSEL OF 538 TONS. *Actual Charges.*	$ cts.	FOR A VESSEL OF 538 TONS. *Actual Charges.*	$ cts.
Entry fees at Custom House	5 00	Entry fees at Custom House	5 00
Tonnage dues at 2 cents per ton	10 76	Tonnage dues at 30 cents per ton	161 40
Harbour dues	26 90	Staten Island Hospital fees	28 00
Pilotage inwards, 15 feet	54 00	Pilotage, 15 feet	88 37
Discharging cargo	190 00	Discharging cargo	218 00
Port Warden (none)	....	Port Warden's Bill	5 00
Wharfage	87 00	Wharfage	85 20
Towage	45 00	Towage	140 00
Harbour Master's fee (none)	....	Harbour Master's fee	12 70
	$418 66		$743 67
FOR A VESSEL OF 700 TONS.		FOR A VESSEL OF 700 TONS.	
If a vessel of 538 tons cost $418.66, what will one of 700 tons cost? Say...	$544 72	If a vessel of 538 tons cost $743.67, what will one of 700 tons cost? Say...	$967 60
Memn. of Commissions not included in above, i.e.		*Memn. of Commissions not included in above, i.e.*	
Procuring freight, 2½ per cent	....	Procuring freight, 5 per cent	....
Inward consignment, 2½ per cent	....	Inward consignment, 2½ per cent	....
Advances for cash, 5 per cent	....	Advances for cash, 2½ per cent	....
Labourers, at $2.50 per day	....	Labourers, at 40 cents per hour, equal to $4.40 per day (11 hours)	....
Carpenters, &c., $2.50 per day	....	Carpenters, at $4.50 per day	....

(Signed,) J. W. DUMSCOMB,
Collector of Customs.

CUSTOM HOUSE,
Quebec, 7th March, 1867.

(No. 1,224.)

APPENDIX No. 50.

No. 1.—STATEMENT of the amount of Produce received at Montreal by Steamers and all other Vessels by way of the St. Lawrence Canals, from the 1st day of July, 1866, to the 30th June, 1867.

—	Flour.	Wheat.	Indian Corn.	Rye.	Peas.	Oats.	Barley.	Ashes.	Pork.	Beef.	Butter.	Cheese.	Lard.	Oatmeal.	Apples.
	Barrels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Barrels.	Barrels.	Barrels.	Kegs.	Tons.	Barrels.	Barrels.	Barrels.
By Steamers............	330,363	366,300	1,779,876	5,940	441,606	22,848	39,816	6,120	9,170	2,429	16,016	603	154	28,380	32,832
By Sailing Vessels ...	55,854	186,351	417,312	158,904	994,092	194,096	335,958	2,664	14	420	7,986	66	1,708	29,890	2,043
Totals...........	386,217	552,651	2,197,188	164,844	1,435,693	216,944	375,774	8,784	9,184	2,849	24,002	669	1,862	58,270	34,875

LACHINE CANAL OFFICE,
Montreal, 12th October, 1867.

(Signed), ALFRED GOUGH,
Collector.

(No. 1,224.)

APPENDIX No. 50.—*Continued.*

No. 2.—COMPARATIVE STATEMENT of the Receipts of Western Produce at the Port of Montreal and by way of the St. Lawrence Canals, during the year ending 31st December, 1866, and the Exports during the same period.

—	Wheat.	Indian Corn.	Peas.	Oats.	Barley.	Rye.	Flour.	Oatmeal.	Corn Meal.	Ashes.		Butter.	Cheese.
										Pot.	Pearl.		
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.	Kegs.	Boxes.
Receipts by Canal	571,447	2,117,208	465,967	722,332	260,983	132,529	392,127	13,814	667	8,373	....	19,336	19,569
" other sources......	380,150	5,665	570,348	1,347,385	75,407	11,253	348,623	10,462	969	14,678	....	73,326	11,339
Totals	951,597	2,122,873	1,036,315	2,069,717	336,390	143,782	740,750	24,276	1,636	23,051	....	92,662	30,908
Total, Exports...........	9,4011	1,885,138	1,147,271	3,485,914	427,322	73,667	461,157	39,515	6,694	29,692	3,367	77,756	27,872

Quantities furnished by Secretary of the Board of Trade.

LACHINE CANAL OFFICE,
Montreal, 14 October, 1867.

(Signed,) J. G. SIPPELL,
Superintendent, L. Canal.

APPENDIX No. 50.—*Continued.*

(No. 1,608.)

No. 3.—PORT OF QUEBEC.—STATEMENT of the amount of Produce received at this Port, by Railway, Steamers and all other Vessels during the year 1866.

Flour.	Wheat.	Indian Corn.	Rye.	Peas.	Oats.	Barley.	Pork.	Beef.	Butter.	Apples.
Barrels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Barrels.	Barrels.	Barrels.	Barrels.
434,130	96,246	75,517	75,375	77,076	193,389	11,529	8,125	1,725	11,432	9,079

The above statement is made from the best sources at my command.

CUSTOM HOUSE,
Quebec, 14th November, 1867.

(Signed), J. W. DUNSCOMB,
Collector.

APPENDIX No. 50.—*Concluded.*

(No. 1,533.)

No. 3.—PORT OF TORONTO.—STATEMENT of the amount of Produce received at this Port by Steamers and other Vessels, during the navigable season of 1866.

Flour.	Indian Corn.	Barley.	Pork and Beef.	Butter.
Barrels.	Bushels.	Bushels.	lbs.	lbs.
9	97,746	16,896	129,870	28

PORT OF TORONTO,
8th November, 1867.

(Signed,) ROBERT SPENCE,
Collector.

APPENDIX No. 51.

(No. 1,224.)

No. 1.—LACHINE CANAL.—STATEMENT of the amount of Flour manufactured, and Grain elevated and stored at the Mills and Stores at Côte St. Paul and St. Gabriel Locks, and at Basins and Nos. 2 and 4, Lachine Canal, during the year 1866.

Name of Mills, &c.	Proprietors.	Flour Manufactur'd.	Grain Elevated and Stored.	REMARKS.
		Barrels.	Bushels.	
Avon Mills, at Côte St. Paul.....	Parkyn and Brodie.........	30,000	....	Quantities furnished by proprietors.
Mornet Royal Mills, do	William Parkyn........	40,360	282,120	
Glenora Mills, St. Gabriel Lock.	A. W. Ogilvie	70,000	600,000	
Royal Mills, Basin No. 2......	Grant, Hall & Co............	35,523	257,611	
City Mills, do	Ira Gould & Sons............	64,227	320,385	
Canal Mills, do	James McDougall............	21,691	152,418	
Store and Elevator, do	James Harvey.................	....	217,317	
Grain Dryer & Elevator, do	Cummings & Farish	....	64,427	Driven by steam power.
Stores & Elevators, Basin No. 4..	James Inglis....................	....	670,600	do do
	Totals	261,801	2,564,878	

(Signed,) J. G. SIPPELL,
Superintendent.

LACHINE CANAL OFFICE,
Montreal, 14th Oct., 1867.

APPENDIX No. 51.—*Continued.*

(No. 1,295.)

No. 2.—WILLIAMSBURGH CANALS.—STATEMENT of the amount of Flour manufactured, and Grain elevated and stored at the Mills and Stores at the Locks No. 22, Farran's Point, No. 23, Morrisburgh, No. 24, Iroquois, No. 25, Edwardsburgh, during the year 1866.

Name of Mills.	Flour Manufactured.	Grain Elevated and Stored.	Proprietors' Names.
	Barrels.	Bushels.	
Farran's Point	4,000	20,000	C. C. Farran.
Rapide Plat.....	7,300	36,500	William Gibson.
Iroquois	6,000	30,000	William Elliott.
Edwardsburgh	6,000	85,000*	W. T. Benson.
Total	23,300	171,500	

* 55,000 bushels manufactured into Starch.

(Sigded,) ISAAC N. ROSE,
Superintendent.

WILLIAMSBURGH CANAL OFFICE,
Morrisburgh, 1st January, 1867.

(No. 1,275.)

APPENDIX No. 51.—*Concluded.*

No. 3.—WELLAND CANAL.—STATEMENT of the amount of Flour manufactured and Grain Elevated and Stored at the Mills, &c., along the line of the Welland Canal, during the year 1866.

Name of Mills, &c.	PROPRIETORS.	Flour manufactured.	Grain Elevated and Stored.
		Barrels.	Bushels.
Ontario Mills, Port Dalhousie	Norris and Neelan	22,622	101,800
Welland Canal Mills, St. Catharines	Thos. R. Merritt	35,435	152,841
Lincoln Mills, do	Thos. R. Merritt	16,706	71,420
Grantham Mills, do	H. Hutchison	13,818	59,923
Phœnix Mills, do	Norris and Neelan	50,000	225,000
Welland Mills, Thorold	Norris and Neelan	18,622	83,800
White Mills, do	John Band	15,000	65,000
Old Stone Mill, do	Lawson and Cowan	5,000	21,000
Port Colborne Elevator.. Through Cargoes	Welland Railway Company		3,011,149
Lighterage, 154 vessels			570,029
From Grand Trunk Railway			50,551
For Millers on the Railway			85,823
	Totals	177,203	4,498,336

(Signed,) S. D. WOODRUFF,
Superintendent.

WELLAND CANAL OFFICE,
16th October, 1867.

APPENDIX No. 52.

(No. 84,740.)

No. 1.—LIST of Number and Tonnage of Sea-going Vessels built in Quebec, as far back as the Records can show (1787)—giving the number above and below 100, 500, 1,000 and 1,500 tons and upwards.

YEARS.	100 Tons and under.		500 Tons.		1000 Tons.		1,500 Tons.		Over 15,00 Tons.		Total	Total
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1787........	16	755	3	677	....	....	....	....	....	....	19	1,452
1788........	58	2,363	....	....	....	....	....	....	....	....	58	2,363
1789........	10	452	....	....	....	....	....	....	....	....	10	452
1790........	10	334	2	320	....	....	....	....	....	....	12	654
1791........	11	452	1	122	....	....	....	....	....	....	12	474
1792........	5	191	1	128	....	....	....	....	....	....	6	319
1793........	11	364	3	545	....	....	....	....	....	....	14	909
1794........	7	242	3	691	....	....	....	....	....	....	10	933
1795........	16	659	3	705	....	....	....	....	....	....	19	1,864
1796........	8	454	5	843	....	....	....	....	....	....	13	1,297
1797........	9	389	5	1,139	....	....	....	....	....	....	14	1,528
1798........	8	340	5	798	....	....	....	....	....	....	13	1,138
1799........	16	741	14	4,280	2	1,167	....	....	....	....	32	6,188
1800........	10	437	10	2,686	1	646	....	....	....	....	21	3,769
1801........	14	637	9	2,223	1	544	....	....	....	....	24	3,404
1802........	10	736	10	2,074	1	560	....	....	....	....	21	3,370
1803........	16	833	14	2,335	....	....	....	....	....	....	30	3,168
1804........	18	1,113	7	1,411	....	....	....	....	....	....	25	2,524
1805........	9	528	6	1,318	....	....	....	....	....	....	15	1,846
1806........	12	632	6	1,700	....	....	....	....	....	....	18	2,332
1807........	7	308	8	2'420	....	....	....	....	....	....	15	2,728
1808........	5	226	8	2'833	2	1, 074	....	....	....	....	15	4,133
1809........	9	417	12	2'998	....	....	....	....	....	....	21	3,415
1810........	13	763	21	4'195	1	575	....	....	....	....	35	5,533
1811........	19	986	30	9,612	5	3,093	....	....	....	....	54	13,691
1812........	11	549	23	6,392	....	....	....	....	....	....	34	6,941
1813........	9	541	9	2,774	....	....	....	....	....	....	18	3,315
1814........	17	888	7	2,424	1	594	....	....	....	....	25	3,906
1815........	28	1,324	10	1,528	1	608	....	....	....	....	39	3,460
1816........	31	1,462	7	2,081	1	670	....	....	....	....	39	4,213
1817........	30	1,352	4	,902	2	1,336	....	....	....	....	36	3,590
1818........	29	1,436	7	1,576	1	554	....	....	....	....	37	3,566
1819........	15	726	10	2,940	....	....	....	....	....	....	25	3,666
1820........	8	314	8	1,770	....	....	....	....	....	....	16	2,084
1821........	14	666	8	1,588	....	....	....	....	....	....	22	2,254
1822........	11	469	9	2,216	....	....	....	....	....	....	20	2,685
1823........	26	1,209	12	2,497	....	....	....	....	....	....	38	3,706
1824........	13	725	24	6,083	....	....	....	....	1	*3,690	38	10,498
1825........	19	1,044	63	18,254	....	....	....	....	1	†5,294	83	24,592
1826........	26	1,478	58	17,694	....	....	....	....	....	....	84	19,172
1827........	27	1,621	34	7,854	....	....	....	....	....	....	61	9,475
1828........	25	1,434	35	7,788	1	560	....	....	....	....	61	9,782
1829........	17	933	16	4,586	1	568	....	....	....	....	34	6,087
1830........	10	604	15	4,189	....	....	....	....	....	....	25	4,793
1831........	25	1,392	10	2,871	3	1,907	....	....	....	....	38	6,170
1832........	11	618	10	2,435	3	1,842	....	....	....	....	24	4,895
1833........	13	935	7	2,271	4	2,392	....	....	....	....	29	5,598
1834........	12	617	17	4,557	6	3,836	....	....	....	....	35	9,010
1835........	11	609	12	2,894	7	4,509	....	....	....	....	30	8,012
1836........	13	749	9	2,751	9	6,655	....	....	....	....	31	10,155
1837........	18	876	6	1,885	10	7,418	....	....	....	....	34	10,179
1838........	16	823	11	2,721	8	5,814	....	....	....	....	35	9,358
1839........	19	885	11	3,453	15	8,324	1	1,267	....	....	46	13,929
1840........	19	979	16	4,577	29	21,005	....	....	....	....	64	26,561
1841........	22	1,300	15	3,502	27	18,320	....	....	....	....	64	23,122

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* Columbus, constructed with a view of evading the timber duties in the United Kingdom.

† Baron of Renfrew.

APPENDIX No. 52.—*Concluded.*

List of Number and Tonnage of Sea-going Vessels, &c.

Year.	100 Tons and under.		500 Tons.		1,000 Tons.		1,500 Tons.		Over 1,500 Tons.		Total Ships.	Total Tons.
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.		
1842.....	34	1,961	13	3,769	10	6,891	....	....	....	....	57	12,621
1843.....	23	1,278	7	2,022	9	6,085	3	3,351	....	....	42	12,736
1844.....	18	1,046	7	1,428	13	9,639	2	2,101	....	....	40	14,214
1845.....	8	337	11	3,019	22	15,626	5	5,731	....	....	46	24,713
1846.....	14	634	4	1,315	16	11,901	5	5,864	....	....	39	19,714
1847.....	26	1,410	11	3,482	30	22,874	7	7,974	....	....	74	35,740
1848.....	24	1,552	12	3,493	13	10,354	6	6,899	....	....	55	22,298
1849.....	35	2,157	14	2,972	16	13,371	8	9,660	....	....	73	28,160
1850.....	33	2,036	10	2,555	21	18,495	10	11,064	....	....	74	34,154
1851.....	17	1,168	12	2,284	17	14,890	20	23,263	....	....	66	41,605
1852.....	14	934	14	3,070	12	10,535	7	8,497	2	3,369	49	26,405
1853.....	28	1,619	21	4,488	9	6,746	26	32,484	5	8,691	89	54,028
1854.....	20	1,140	21	3,645	14	10,612	19	23,903	4	7,254	78	46,554
1855.....	39	2,048	30	5,974	10	7,961	15	17,789	1	2,030	95	35,802
1856.....	41	2,167	22	6,335	14	11,856	12	13,982	1	1,502	90	35,842
1857.....	30	1,586	13	3,355	30	22,273	9	9,872	1	1,558	83	38,644
1858.....	23	1,102	8	1,848	15	11,902	5	5,666	....	....	51	20,518
1859.....	16	667	13	2,737	7	5,223	5	5,841	....	....	41	14,468
1860.....	25	1,234	10	2,660	12	9,111	8	9,580	....	....	55	22,585
1861.....	19	832	9	2,657	15	12,818	8	9,239	....	....	51	25,546
1862.....	27	1,514	21	5,297	8	5,746	11	12,904	1	1,752	68	27,213
1863.....	22	1,531	21	6,341	17	11,179	26	32,383	2	3,301	88	54,735
1864.....	28	1,905	24	5,096	28	19,943	22	27,384	3	5,005	105	59,333
1865.....	46	2,742	31	6,335	14	10,507	22	26,117	....	....	113	45,701
1866.....	41	2,370	30	7,167	21	13,968	11	13,259	....	....	103	36,764
	1,528	80,880	1,058	268,470	535	395,077	273	326,074	22	43,446	3,416	1,113,947

Custom House,
Quebec, 14th February, 1867.

APPENDIX No. 53.

STATEMENT shewing the Number of Vessels Wrecked and Stranded in the Gulf and River St. Lawrence, during the undermentioned years.

Date.		Name of Vessel.	At what Place.	Date.		Name of Vessel.	At what Place.
Years.	Month.			Years.	Month.		
1840	April	Magnet	White Island Reef.	1840	June	Minerva	Beaumont.
		Hibernia	North Pilgrim.			Mountaineer	Cacouna.
	May	Hero	South-west of Ancosti.		July	Quebec	Manicouagan Shoals.
		Voyageur	Bonaventure.			England	Coming up the river.
		Chippewa	Cape Rosier.			Cerus	Anticosti.
		Arabian	do		Oct	Three Schooners	Grand River.
		Brothers	Percé Rocks.		Dec	Marie Charlotte	Magdalen Islands.
	June	Eleanor	Hare Island Shoal.			Brig	do
		Union	The Traverse (St. Rochs)				
1841	May	A Bark	Bic.	1841	Aug	Lord Cochrane	Labrador.
		do	Anticosti.		Sept	Margaret	Egg Island.
		Annandale	Magdalen Islands.			Quebec	Red Island Reef.
	June	Eleutheria	Rivière Oueillet.			Two Vessels	Anticosti.
		Orwin	Green Island.			Full rigged Ship	Métis.
	July	Fair Isle	Anticosti.		Oct	Helen Stewart	Crane Island.
		Walmsley Dale	do			Caroline	Beaumont Reef.
		Townley	do		Nov	Portland	Ste. Anne.
	Aug	Undaunted	Sable Island.			Eddystone	St. Thomas Shoal.
1842	May	Jane Black	Pointe des Monts.	1842	Nov	Briton	Green Island.
		Kent	Seven Islands.			Gleaner	Goose Island.
		Courier	Métis.			Aberdeen	Green Island.
		Morning Star	Duncan Reef.			Enterprize	Manicouagan Shoals.
	Sept	Euphrosine	Matane.			Alderm'n Thompson	Anticosti.
		Adelaide	Ste. Marguerite Island.				
		Resolution	Matane.			Emerentine	do
	Oct	Argyle	Cape Breton.		Dec	Bellona	Kamouraska.
	Nov	Welsford	Green Island.			Thetis	Manicouagan Shoals.
		George Ramsay	Cacouna.			Johanna	Heron, Baie des Chaleurs
1843	April	Brunette	St. Paul's Island.	1843	Nov	Content	Caribou Island.
		Quebec	Red Island Reef.			Josephine	Jeremie Island.
	May	Bachelor	West Boint, Island of Orleans.			Neptune	do
						Bernard	do
		William Ripon	St. Paul's Island.			Mersey	Portneuf.
		Tom Moore	White Island Reef.			Crusader	Cape Wapitongane.
	Sept	African	Cape St. Lawrence.				
1844	April.	Amaranth	Lost in the Gulf.	1844	Oct	A Schooner	Godbret.
	May	St. Patrick	Indian Harbor.			Quebec	Hare Island.
		Prince Albert	In the Gulf.			Orbit	Red Island.
	July	Hannagh	Anticosti.			Carleton	Manicouagan Shoals.
		Warrior	Magdalen Islands.		Nov	Cyrus	Portneuf.
	Oct	Indian Chief	Cape Rosier.			Prince George	Ste. Anne.
		Maria (schoon'r)	Godbret.				
1845	April.	Eliza Ann	In the Ice (Gulf.)	1845	June	Green House	Anticosti.
	May	Vanguard	St. Paul's Island.		Aug	Dumfriesshire	do East Point.
		Rhydiol	In the Ice (Gulf.)			Osprey	do S.W. do
		Lamport	Cape Breton.		Sept	Briton's Queen	Flat Island.
		Rosebank	Scatterie.		Oct.	Eliza Ann	Cape Chat.
		Sapphire	Cape North Bay.			Leo	Straits Bélisle.
		Thomas & Mary	In the Ice.		Nov	Ann Crossman	Rivière Ouelle.
		Amelian	do			European	Mille Vaches.
	June	Coquette	Magdalen Islands.			Antelope	Ste. Anne.
		William Henry	Miquelon.			Gaspé Packet	Red Island.
		Indemnity	Magdalen Islands.			Reaper	Mille Vaches.

APPENDIX No. 53.—*Continued.*

STATEMENT shewing the Number of Vessels Wrecked and Stranded, &c.—*Cont'd.*

DATE.		Name of Vessel.	At what Place.
Years.	Month.		
1845	Nov.	Magnet	Green Island.
		Queen	Dog Island.
		Elizabeth Atkinson	Manicouagan Shoals.
		Covenanter	Goose Island.
		Universe	Brandy Pots.
		Maria	Ile aux Coudres.
		Mary Sharp	Crane Island.
		Crusader	Kamouraska.
		Jane	St. André.
		Sir Robert Peel	Kamouraska.
		Ceylon	Bic.
	Dec.	William Bayard	Cape Chat.
		Montreal	do
1845	Dec.	A Schooner	Cape Chat.
		Industry	Pilgrim Islands.
		Jane Morrison	Manicouagan Shoals.
		Stedfast	Magdalen Islands.
		Arethusa	do
		Ann	Point St. Denis.
		William	Portneuf.
		Sir Richard Jackson	Manicouagan Islands.
		William Lloyd	Magdalen Islands.
		Laurel	Green Island.
		Elizabeth	Water-logged, and seen passing Gaspé.
1846	April	Athol	St. George's Bay.
		St. Andrew	Red Island Reef.
		Indian Queen	Battures off Cocagne.
		A vessel	Water-logged off St. Pierre, Newfoundland.
	May	do	On the Banks.
		Pekin	Cape Rosier.
		Eagle	Matane.
	June	Salisbury	Brandy Pots.
		Providence	Portneuf.
		Brig	St. Thomas.
		Liverpool	Basque Island.
		Montreal Packet	Labrador.
	July	Lord John Russell	Cape Gaspé.
		Wellington	Grand Métis.
		Lady Peel	Basque Island.
		Borneo	Lost in the Straits of Belle-ile.
	Aug.	Calcutta	Little Métis.
	Sep.	Kate	Goose Island.
		Hebe	Manicouagan Shoals.
		China	do
		Sir James McDonald	Kamouraska Island.
		Hartland	Traverse (St. Rochs).
		St. Andrew	Beauport Shoals.
1846	Sept.	Harvey	Beauport Shoals.
		Promise	Point St. Laurent.
		Clyesdale	Mille Vaches.
		A Bark	do
		Robert Stride	Green Island.
		Cove	Red Island.
	Oct.	Industry	The Banks.
		Agnes	Pillar Rocks.
		Thomas	Mille Vaches.
		Magnet	Anticosti.
		Milliner	Métis.
		Ocean	do
		A Schooner	Malbaie.
		do	do
	Nov.	Beaver	Miramichi.
		Douchfour	Cape Rosier.
		Mersey	Matane.
		Reliance	do
		Empire	do
		574	Anticosti.
		Countess of Durham	Jeremie Island.
		Marquis of Wellesley	St. Simon.
		Lloyds	Ste. Anne.
		Amy Ann	Cape Chats.
1847	May	Rory O'More	Métis.
		Geddie	Matane.
		Carrick	Cape Rosier.
	June	Sylvia	Magdalen Islands.
		Miracle	do
		Lucius Carey	Gut of Canso.
	July	John and Mary	South-west Point, Anticosti.
		Faugh a Ballagh	Brion Island, near Magdalen Islands.
		Waterloo	Anticosti.
	Aug.	City of Derry	Bicquet Island.
1847	Aug.	Elizabeth	Jedore.
		Canton	Cape Wrath.
		Emerald	Cape North.
	Sept.	Leo	Ingonish Bay.
		Mary Leonore	Fox River.
	Oct.	Schooner	do
		do	do
		Princess Charlotte	Trinity Bay.
		Mary and Margaret	Blanc Sablon.
		Nautilus	do
1848	May	The Margaret Pollock	St. Michel.
		Astoria	Little Fox River.
1848	May	Primrose	South-west Point, Anticosti.
		Lumley	English Point.

APPENDIX No. 53.—*Continued.*

STATEMENT shewing the Number of Vessels Wrecked and Stranded, &c—*Concluded.*

Date.		Name of Vessel.	At what Place.
Years.	Month.		
1848	June	Ledy Seaton	Magdalen Islands.
		Pekin	Kamouraska.
		Effingham	Jeremie Island.
	Aug.	William Wallace	Magdalen Islands.
	Sept.	A vessel	Anticosti.
		2 schooners	Fox River.
1849	April	Chieftain	Sunk near Bird Islands.
	May	Coverdale	Between St. Paul's and Bird Islands.
		Gleaner	
		Maria	Near St. Pauls in the ice.
		Torrance	do
		Mary Elizabeth	In the ice.
		Resolution	do
	June	Albion	Brian Island.
		Veloce	Going into Richibucto.
		Elizabeth	Brian Island.
	Aug.	Blonde	Sable Island.
	Sept.	Lavinia	Grand Pabos.
		Marie Louise	Malbaie.
		Despatch	English Point.
1848	Sept.	A Brig	Point Gaspé.
		Ann	Anticosti.
		Spalpeen	Cape Rosier.
		Florence	do
	Nov	Wilson Kennedy	Gaspé.
1849	Oct.	Eldon	Kamouraska.
		Sir Charles Napier	Mingan Island.
		Elspeth	Labrador.
		Eldorado	Red Island.
		Queen Victoria	Mille Vaches Shoals.
		Lermick	Manicouagan Shoals.
		Agnes and Ann	Anticosti.
		Mary and Harriett	do
	Nov	Dickson	Cacouna.
		St. Lawrence	Miscou Island.
		Ste. Helene	Arichat.
		Henry Thomas	Gut of Canso.

Number of lost, wrecked, stranded and damaged Vessels, voyaging to and from the port of Quebec, for the years 1856 to 1866, inclusive.

1856	38	1862	94
1857	49	1863	75
1858	51	1864	55
1859	52	1865	48
1860	43	1866	67
1861	102		

APPENDIX No. 54.

RETURN of Passages, Number of Passengers, and Cargoes of the Steamships of the Montreal Ocean Steamship Company, under Contract for the Conveyance of the Mails from Liverpool to Quebec and Portland, from 9th Nov., 1865, to 4th December, 1866.

STEAMSHIP.	CAPTAIN.	Left Liverpool.	Arrived at Portland.	Passage.		No. of Passengers.	Freight in Tons.	
				Days.	Hours.		Portland	Canada.
		1865.	1865.					
North American	Kerr	Nov. 9...	Nov. 23...	13	4	327	133	692
Nova Scotian	Wylie	" 16...	" 28...	11	2	312	90	1183
Hibernian	Dutton	" 23...	Dec. 6...	12	3	420	104	507
Damascus	Watts	" 30...	" 14...	13	5	90	336	723
Peruvian	Ballantine	Dec. 7...	" 18...	10	1	369	131	629
Belgian	Brown	" 15...	" 31...	15	1	278	205	909
			1866.					
Moravian	Aiton	" 21...	Jan. 6...	15	2	308	209	669
North American	Kerr	" 28...	" 23...	25	....	127	303	673
		1866.						
Nova Scotian	Wylie	Jan. 4...	" 19...	14	14	248	223	759
Hibernian	Dutton	" 11...	" 25...	12	17	245	148	697
Damascus	Watts	" 18...	Feb. 3...	15	2	84	185	965
Peruvian	Ballantine	" 25...	" 8...	13	4	341	807	288
Belgian	Brown	Feb. 1...	" 20...	16	20	231	163	1076
Moravian	Aiton	" 8...	" 19...	10	20	272	249	1431
North American	Kerr	" 15...	Mar. 2...	14	21	121	393	819
Nova Scotian	Wylie	" 22...	" 9...	13	13	271	226	1382
Hibernian	Dutton	Mar, 1...	" 13...	11	10	274	283	1132
Peruvian	Ballantine	" 8...	" 19...	10	14	218	211	1165
Moravian	Aiton	" 15...	" 29...	12	15	251	240	1445
Damascus	Watts	" 22...	April 4...	12	10	139	249	599
Belgian	Brown	" 29...	" 10...	11	2	516	248	592
St. David	Aird	April 5...	" 19...	13	9	437	87	504
Nova Scotian	Wylie	" 12...	" 26...	12	17	522	212	365
			At Quebec.				Quebec.	Montreal and West
Hibernian	Dutton	" 19...	May 1...	10	1	488	225	869
Peruvian	Ballantine	" 26...	" 6...	9	4	568	80	813
Moravian	Aiton	May 3...	" 15...	10	17	855	93	559
Belgian	Brown	" 10...	" 23...	11	4	390	145	902
St. David	Aird	" 17...	" 30...	12	3	288	160	1013
Nova Scotian	Wylie	" 24...	June 4...	10	16	605	101	746
Hibernian	Dutton	" 31...	" 10...	9	16	520	187	753
Peruvian	Ballantine	June 7...	" 18...	9	11	514	87	671
Moravian	Aiton	" 14...	" 26...	10	19	354	115	813
Damascus	Watts	" 21...	July 7...	12	3	255	88	654
St. David	Aird	" 28...	" 12...	13	14	269	120	993
Nova Scotian	Wylie	July 5...	" 16...	10	1	237	64	1121
Hibernian	Dutton	" 12...	" 26...	9	7	212	84	1171
Peruvian	Ballantine	" 19...	" 28...	8	11	236	61	1262
Moravian	Aiton	" 26...	Aug. 5...	9	1	240	88	1598
Damascus	Watts	Aug. 2...	" 15...	12	12	26	71	1163
St. David	Aird	" 9...	" 21...	11	9	51	101	1438
Nova Scotian	Wylie	" 16...	" 27...	10	9	317	77	1387
Hibernian	Dutton	" 23...	Sept. 3...	9	15	371	112	1092
Peruvian	Ballantine	" 30...	" 9...	8	22	227	148	1277
Moravian	Aiton	Sept. 6...	" 17...	9	21	311	161	1622
Damascus	Watts	" 13...	" 27...	13	18	307	63	715
Nova Scotian	Wylie	" 20...	Oct. 2...	11	1	222	112	762
Hibernian	Dutton	" 27...	" 9...	10	13	376	99	1059
Belgian	Brown	Oct. 4...	" 14...	9	18	257	129	816
Peruvian	Ballantine	" 11...	" 21...	8	19	425	91	903
Moravian	Aiton	" 18...	" 30...	11	6	222	38	870
Damascus	Watts	" 25...	Nov. 8...	13	5	265	79	586
Nova Scotian	Wylie	Nov. 1...	" 14...	12	13	166	354	980
Totals				620	11	15875	8768	47812

Average length of Passage, Westward ....11 days. 22 hours.
do do Eastward ....10 do 21 do

APPENDIX

RETURN of Passages, Number of Passengers, and Cargoes of the Steamships of the Mails, from Quebec and Portland to Liverpool,

STEAMSHIP.	CAPTAIN.	Left Portland.	Arrived at Liverpool.	Passage.		No. of Passengers.
				Days.	Hours.	
		1865.	1865.			
*Moravian	Aiton	Dec. 2...	Dec. 12...	9	17	52
North American	Kerr	" 9...	" 23...	13	15	37
Nova Scotian	Wylie	" 16...	" 28...	11	15	45
			1866.			
*Hibernian	Dutton	" 23...	Jan. 3...	11	7	45
Damascus	Watts	" 30...	" 11...	11	6	23
		1866.				
*Peruvian	Ballantine	Jan. 7...	" 18...	11	6	59
‡Belgian	Brown	" 13...	" 26...	11	10	79
*Moravian	Aiton	" 20...	" 30...	9	19	42
North American	Kerr	" 28...	Feb. 10...	13	8	15
*Nova Scotian	Wylie	Feb. 4...	" 15...	11	14	40
*Hibernian	Dutton	" 11...	" 22...	10	12	47
Damascus	Watts	" 18...	Mar. 3...	14	9	25
Moravian	Aiton	" 25...	" 8...	10	13	17
Belgian	Brown	Mar. 4...	" 16...	12	10	27
North American	Kerr	" 11...	" 25...	13	11	14
Nova Scotian	Wylie	" 18...	" 29...	10	19	19
Hibernian	Dutton	" 25...	April 5...	11	8	42
Peruvian	Ballantine	" 31...	" 14...	11	10	39
Moravian	Aiton	April 7...	" 18...	10	8	31
Damascus	Watts	" 14...	" 28...	13	14	23
*Belgian	Brown	" 22...	May 4..	11	13	68
North American	Kerr	" 28...	" 11...	12	7	33
Nova Scotian	Wylie	May 5...	" 16...	10	23	58
		Left Quebec.				
Hibernian	Dutton	May 12...	" 24...	11	6	104
Peruvian	Ballantine	" 19...	" 30...	9	17	127
Moravian	Aiton	" 26...	June 5...	9	17	136
Belgian	Brown	June 2...	" 13...	11	5	84
St. David	Aird	" 9...	" 22...	12	20	50
Nova Scotian	Wylie	" 16...	" 26...	9	16	114
Hibernian	Dutton	" 23...	July 2..	9	8	128
Peruvian	Ballantine	" 30...	" 9...	8	16	134
Moravian	Aiton	July 7...	" 17...	9	17	124
Damascus	Watts	" 14...	" 25...	10	23	58
St. David	Aird	" 21...	Aug. 2...	11	17	79
Nova Scotian	Wylie	" 28...	" 7...	10	....	75
Hibernian	Dutton	Aug. 4...	" 15...	9	18	81
Peruvian	Ballantine	" 11...	" 21...	10	3	101
Moravian	Aiton	" 18...	" 28...	9	20	82
Damascus	Watts	" 25...	Sept. 4...	10	1	32
Nova Scotian	Wylie	Sept. 1er	" 11...	10	8	46
Hibernian	Dutton	" 8...	" 18...	9	6	53
Belgian	Brown	" 15...	" 25...	9	23	64
Peruvian	Ballantine	" 22...	Oct. 1er	9	2	63
Moravian	Aiton	" 29...	" 8...	9	3	62
Damascus	Watts	Oct. 6...	" 23...	16	10	40
Nova Scotian	Wylie	" 13...	" 23...	10	6	83
Hibernian	Dutton	" 20...	" 31...	9	17	88
Belgian	Brown	" 27...	Nov. 6...	10	3	48
Peruvian	Ballantine	Nov. 3...	" 13...	10	1	64
Moravian	Aiton	" 10...	" 20...	9	13	77
Damascus	Watts	" 17...	" 28...	10	7	37
Nova Scotian	Wylie	" 24...	Dec. 4...	10	11	105
Totals	....	....	....	567	12	3219

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* Loaded at New York.

‡ Called at St, Johns, Newfoundland.

No. 54.—*Continued.*

the Montreal Ocean Steamship Company, under Contract for the Conveyance of from 9th November, 1865, to 4th December, 1866.

Barrels Ashes.	Barrels Flour.	Barrels Grain.	Kegs Butter.	P'kgs. Pro-visions.	P'kgs. Cheese.	Staves.	Deals.	Leather.	Barrels Oatmeal.	Sundries	Total Barrel Bulk.
...	...	...	...	...	...	...	...	...	...	...	...
44	2795	13931	1379	177	...	...	...	...	...	693	7750
173	3205	17117	848	269	...	31 M.	...	...	...	146	8817
...	...	...	...	...	...	...	...	...	...	...	...
759	1025	2263	2259	899	...	11 M.	...	...	...	20	5553
...	...	...	...	...	...	...	...	...	...	...	...
723	1802	4238	854	1587	...	14 M.	...	...	...	1094	7625
...	...	...	...	...	...	...	...	...	...	...	...
619	1475	...	773	1931	...	20 M.	...	...	...	366	6863
...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...
502	...	...	1791	1853	...	...	...	250	...	22	5787
397	5006	10686	114	454	...	...	...	...	700	276	10176
129	3680	4100	307	578	...	...	...	...	...	35	6506
53	1100	4119	495	836	...	...	...	...	...	36	4181
154	...	...	...	...	...	...	230	...	...	...	7362
402	1000	15606	...	678	...	...	...	...	...	15	6390
308	1100	...	68	724	...	...	79	...	...	237	6038
270	1500	...	...	1324	...	...	32	...	900	118	6030
161	600	11600	...	1164	...	...	13	...	...	567	6066
...	...	...	...	...	...	...	...	...	...	...	...
156	...	11250	...	2261	...	...	...	...	1636	...	6866
302	...	25159	3	1758	...	...	...	...	...	110	8025
290	...	29570	...	1328	289	...	...	...	900	1596	8503
355	...	27701	...	316	...	...	...	...	2160	4515	9324
355	...	46874	...	236	...	...	...	...	100	2005	10155
660	...	31950	...	29	87	...	...	...	...	1712	7760
390	...	49226	...	...	251	...	...	...	99	1227	9874
234	...	38358	...	...	...	...	...	...	1002	1241	9357
179	...	23328	10	35	125	...	...	...	1819	3700	8765
251	...	24083	459	7	562	...	...	...	...	3447	7218
157	...	38794	215	16	857	...	3494	...	568	480	10029
128	...	17852	1155	...	1763	...	...	...	936	1522	6949
101	...	32929	507	...	341	...	8133	...	574	241	9179
234	...	27339	856	...	406	...	4587	...	200	144	9058
276	...	25758	1980	...	477	...	582	...	1236	333	8556
40	1500	21979	1196	...	363	...	3424	...	150	171	8073
84	1500	16748	1148	...	465	...	4869	...	1210	698	10114
164	...	6111	1213	...	499	...	5073	...	1418	322	6232
...	...	...	150	...	...	...	14887	...	...	7	7166
...	...	...	...	...	239	...	12634	...	123	1036	6800
91	...	28361	1991	...	1276	...	2022	...	...	1912	10046
35	...	27784	1356	...	370	...	2522	...	175	83	8056
145	...	30538	2838	...	51	...	4605	...	...	372	10486
181	...	26209	3572	...	963	...	...	...	...	83	7719
62	...	36254	2596	...	320	...	3742	...	...	403	10148
166	...	31877	2705	122	360	...	...	...	200	397	9023
252	22	30624	2618	...	638	...	1022	...	200	704	9059
66	6	43605	3084	309	105	...	...	...	...	205	10345
...	200	39484	3887	181	...	...	...	...	...	252	9582
330	13	15843	4096	184	120	...	...	...	...	435	6397
168	9	35345	2040	178	1559	...	...	...	...	552	10174
10546	27538	924593	48563	19434	12486	76 M.	71950	250	16306	33530	364181

(Signed,) Wm. White,
Secretary, P. O. Dept.

APPENDIX No. 55.

PROCLAMATIONS RESPECTING TOLLS AND REGULATIONS ON PUBLIC WORKS.

—	NAMES OF WORKS.	When and where Proclamation of His Excellency the Governor General in Council, is published in the Canada Gazette, respecting the same.													
		Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.
	CANALS AND RIVERS.														
Tolls	Canals (in general)	1846 1863	3104 1152	1851	10429	1852	12,143 12,360	1853	623 1,043	1856	1,367	1857	2,584	1860 abol	1,522 ished.
Regulations	do do	1845	2182	1846	3114	1857	1,252	.....	.....	.....	.....	.....	.....	.....	.....
Tolls	Lachine Canal	1845	1750	1846	2955 3104	1847	4,488	1848	5,401	1860	1,573 2,350	1862	916	.....	.....
do	do (basin)	1846	3113	1847	4366	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do	do (sheds)	1846	2955	1847	3717	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do	Beauharnois Canal	1846	2955 3104	1848	5401 5504	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do	Cornwall do	1846	2955 3104	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....	.....
do	St. Lawrence do	1848	5242 5465 5385	1849	6111	1850	8,296	1851	10,430	1852	12,360	1853	432	1859	1,479
		1863	1153 1510	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
do	Rideau and Ottawa Canal, or ordenance Canals	1842	258 259	1846	2654	1851	11,243	1860	1,159	1863	1,510	1865	1,307	.....	.....
Regulations	do do	1845	1919	1847	4629	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tolls	Ste. Anne Lock	1843	1036	1845	1757	1846	3,110	1850	8,296 8,769	1863	1,510	.....	.....	.....	.....
do	St. Ours do	1846	3110	1849	7052	1850	8,239 8,572 8,296	1851	10,430	1852	12,360	1853	432	1859	1,479
do	Chambly Canal	1843	780	1845	1750	1846	3,104	1847	4,221	1848	5,385	1849	6,411 6,906	1850	8,239 8,572 8,296
		1851	10430	1852	12360	1853	432	1859	1,479	1863	1,510	.....	.....	.....	
Regulations	do do	1843	779	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tolls	Burlington Bay Canal	1843	928	1845	1750	1846	3,104	1848	5,241 5,385	1863	1,510	.....	.....	.....	.....

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Regulations...	do do	1855	1283	...	...	...	...	...	...	...	...	...	...
Tolls	Welland do	1845	1754	1846	2839 3104	1847	4,851	1848	5,385 5,465	1849	6,411	1850	8,296 8,572	1851	10,430
		1852	12360	1853	432	1859	1,479	1860	1,024	1861	932	1862	1,857	1863	1,510
		1865	1307	...	...	...	...	...	...	...	...	...	...
Regulations...	do do	1847	4851	...	...	...	...	...	...	...	...	...	...
Tolls	Locks, New Castle District	1845	1757	1846	3110	...	...	...	...	...	...	...	...
Regulations..	do do	1860	1575	...	...	...	...	...	...	...	...	...	...
Tolls	Lake Erie to Lake Champlain	1850	8296	1851	10430	1859	1,479	...	...	...	...	...	...
do	Lake St. Peter, 13 & 14 Vic., cap. 97	1852	12267	...	...	...	...	...	...	...	...	...	...
do	River St. Maurice	1854	791	...	...	...	...	...	...	...	...	...	...
do	Gatineau River Works	1848	5266	1852	12359	...	...	...	...	...	...	...	...
do	Coulonge	1865	3351	...	...	...	...	...	...	...	...	...	...
	SLIDES AND BOOMS.												
Tolls and Regulations....	Provincial Slides	1847	4,048	1865	1,684 1,686	...	...	...	...	...	...	...	...
Tolls	Saguenay Slides, &c., Chicoutimi booms	1860	1,158	1860	1,523	1860	2,935	1865	1,304	...	...	...	...
Regulations...	do do	1860	2,935	1865	1,304	...	...	...	...	...	...	...	...
Tolls	Ottawa Slides	1844	1,253	1845	1,753	1846	3,112	1847	4,048	1860	1,158	1860	1,574	...	...
do	Carillon Slides	1860	1,158	...	...	...	...	...	...	...	...	...	...
do	Petewawa Slides	1858	1,247	1848	1,354	1860	1,158	1860	1,574	1862	2,476	1865	3,351	...	...
do	Madawaska Slides	1844	1,253	1845	1,753	1846	3,112	...	...	...	...	...	...
Regulations and Tolls..	do do	1847	4,048	1847	4,596	1860	1,574	1865	3,351	...	...	...	...
Tolls	Black River Slides	1867	1,611	...	...	...	...	...	...	...	...	...	...
do	New-Castle District Slides	1845	1,753	1846	3,112	1866	4,820*	...	...	...	...	...	...
Regulations..	do do	1845	2,186	1846	3,116	...	...	...	...	...	...	...	...
Tolls	Chaudière, Chenaux & Gatineau booms	1860	1,574	...	...	...	...	...	...	...	...	...	...
Regulations..	Crown Timber	1866	2,150	...	...	...	...	...	...	...	...	...	...
	WHARVES.												
Tolls or rates.	Pointe au Platon Wharf	1863	2,117	...	...	...	...	...	...	...	...	...	...
do	Lotbinière Wharf	1865	1,918	...	...	...	...	...	...	...	...	...	...
	HARBORS.												
Tolls	Toronto Harbor	1840	3	...	...	...	...	...	...	...	...	...	...
do	Port Stanley do	1845	1,750	1846	3,107	...	...	...	...	...	...	...	...

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* The Locks and works at Crooks' and Chisholm's Rapids, in the New-Castle District, having been constructed for purposes of navigation only, and not being required for the passing of timber, it was considered unjust to levy tolls on timber passing at those places, and for this reason they were not mentioned in the Order in Council of the 8th December, 1866. Therefore timber passes free of toll through the Public Works at Crooks' and Chisholm's Rapids.

APPENDIX No. 55.—*Continued.*—PROCLAMATIONS RESPECTING TOLLS AND REGULATIONS ON PUBLIC WORKS.

—	NAME OF WORK.	When and where Proclamation of His Excellency the Governor General in Council, is published in the Canada Gazette, respecting the same.													
		Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page.	Year.	Page	Year.	Page.
	HARBORS.—*Continued.*														
Tolls	Port Maitland Harbor	1845	1,750	1846	3,107	1863	1,509								
do	Port Dover do	1845	1,750	1846	3,107										
do	Port Colborne do	1845	1,750	1846	3,107	1863	1,509								
do	Port Dalhousie do	1845	1,750	1846	3,107										
do	Windsor do	1845	1,750	1846	3,107	1847	4,362								
do	Rondeau do	1846	3,107												
do	Port Burwell do	1846	3,107												
do	Harbors (in general)	1846	3,117	1847	4,852										
	OTHER PUBLIC WORKS.														
Tolls	Public Works	1849	6,411	1863	1,510										
Regulations and Tolls	Light Houses	1846	3,117												
	ROADS.														
Tolls	Roads (in general)	1847	4,364	1849	6,412										
Regulation	do do	1845	2,185	1846	3,117	1847	4,366								
Tolls	West Gwillimbury Road	1841	147												
do	Cascades and Côteau do	1845	1,748	1846	3,111	1847	4,364	1849	6,412						
do	Brantford and London do	1845	1,748	1846	3,111	1847	4,364	1849	6,412						
do	London and Port Stanley	1845	1,748	1846	3,111	1847	4,364	1849	6,412						
do	Hamilton and Port Dover	1845	1,748	1846	3,111	1847	3,795 4,364	1849	6,412						
do	Windsor and Scugog	1845	1,748	1846	3,111	1847	4,364	1849	6,412 7,074						
do	Port Hope and Rice Lake	1845	1,748	1846	3,111	1847	4,364	1849	6,412						
do	Main road from Quebec to Sandwich	1846	3,111*												
do	Quebec to Cap Rouge	1846	3,111												
do	Montreal to Bout de l'Ile	1846	3,111												
do	Kingston to Napanee	1846	3,111	1847	4,364	1849	6,412								
do	East York, 18 miles West York, 16 do	1846	3,111	1847	4,364	1849	6,412								

do	Hamilton and Brantford.................	1846	3,111	1847	3,795 4,364	1849	6,412	...	...	...	...	...	...	...	...
do	North Toronto to Holland Landing...	1846	3,111	1847	4,364	1849	6,412	...	...	...	...	...	...	...	...
do	Lake Shore Road..............................	1847	4,364	1849	6,412	...	...	...	...	...	...	...	...	...	...
do	Queenston and Grimsby..................	1847	4,439	...	...	...	...	...	...	...	...	...	...	...	...
do	St. Athanase	1848	5,375	...	...	...	...	...	...	...	...	...	...	...	...
do	Chambly and Granby	1849	7,027	...	...	...	...	...	...	...	...	...	...	...	...
do	Chemins des Caps.............................	1854	526	...	...	...	...	...	...	...	...	...	...	...	...
	BRIDGES.														
Tolls on	Bridges in general	1847	4,507	1848	5,213	1849	6,412	1851	19,728	1853	2	...	...	...	...
Regulations..	do do	1845	2,184	1846	3,116	...	...	...	...	...	...	...	...	...	...
do	Bridges on Chippewa River –.............	1860	2,157	...	...	...	...	...	...	...	...	...	...	...	...
Tolls on	Chaudière Bridge	1845	1,748	1846	3,112	1849	6,412	1851	10,729	...	...	...	...	...	...
do	Cap Rouge	1845	1,748	1846	3,112	...	...	...	...	...	...	...	...	...	...
do	Ste. Anne de la Pérade	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	...	...	...	...
do	Batiscan	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	...	...	...	...
do	St. Maurice–...	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	...	...	...	...
do	Union Suspension, Ottawa..................	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	1853	756	...	...
do	Trent	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	...	...	...	...
do	Narrows	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	...	...	...	...
do	Dunnville	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	...	...	...	...
do	Caledonia	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	...	...	...	...
do	Paris	1845	1,748	1846	3,112	...	...	...	...	...	...	...	...	...	...
do	Brantford	1845	1,748	1846	3,112	1847	4,365	1849	6,161 6,412	1851	10,729	...	...	...	...
do	Delaware...	1845	1,748	1846	3,112	1847	4,365	1849	6,412	1851	10,729	...	...	...	...
do	Chatham	1845	1,748	1846	3,112	1850	8,296	...	...	...	...	...	...	...	...
do	Chateauguay	1847	4,229 4,365	1849	6,412	1851	10,729	...	...	...	...	...	...	...	...
do	Etchemin	1847	4,507	...	...	...	...	...	...	...	...	...	...	...	...
do	Bécancour	1848	5,376	1849	6,412	1851	10,729	...	...	...	...	...	...	...	...
do	Duchesne	1848	5,376	1849	6,412	1851	10,729	...	...	...	...	...	...	...	...
do	Godfroy	1848	5,376	1849	6,412	1851	10,729	...	...	...	...	...	...	...	...
do	Jacques Cartier......	1848	5,376	1849	6,412	1851	10,729	1853	2	...	...	...	...	...	...
do	Melbourne	1848	5,376	1849	6,412	1851	10,729	...	...	...	...	...	...	...	...
do	Nicolet	1848	5,376	1849	6,412	1851	10,729	...	...	...	...	...	...	...	...
do	Rimouski River......................................	1848	6,009	1849	6,412	1851	10,729	...	...	...	...	...	...	...	...

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* The Main Road from Quebec to Sandwich comprises, the Roads from: Quebec to Cap Rouge—Montreal to Bout-de-l'Ile—Cascades and Côteau—Kingston to Napanee—East York 18 miles—West York, 16 miles—Hamilton and Brantford,—and Brantford and London Roads.

The Branch Roads are: London and Port Stanley—Hamilton and Port Dover—South Toronto to Holland Landing—Windsor and Scugog—Port Hope and Rice Lake—(*Vide* Canada *Gazette* of 1846, page 311.)

OTTAWA, 30th July 1867.

H. A. FISSIAULT.

APPENDIX No. 56.

Table of Distances from the Principal Seaports in North America, to Liverpool, Havre, Havana and Rio Janeiro.

			Geographical Miles.
Quebec	to Liverpool.	*Viâ* Belle-Ile	2,649
		" Cape Race	2,808
	Havre	" Belle-Ile	2,810
		" Cape Race.	2,939
	Havana		2,891
	Rio Janeiro		5,546
Boston	to Liverpool		2,895
	Havre		2,993
	Havana		1,530
	Rio Janeiro		4,935
New York	to Liverpool		3,095
	Havre		3,228
	Havana		1,240
	Rio Janeiro		4,885
Philadelphia	to Liverpool		3,275
	Havre		3,358
	Havana		1,190
	Rio Janeiro		4,990
Baltimore	to Liverpool		3,450
	Havre		3,543
	Havana		1,160
	Rio Janeiro		5,000
Richmond	to Liverpool		3,380
	Havre		3,473
	Havana		1,090
	Rio Janeiro		4.930
New Orleans	to Liverpool		4,780
	Havre		4,838
	Havana		595
	Rio Janeiro		5,315

APPENDIX No. 57.

SUMMARY OF ACTS CONCERNING TURNPIKE ROADS, &c., IN LOWER CANADA; NOW THE PROVINCE OF QUEBEC.

TURNPIKE ROADS, &c., NEAR QUEBEC.

QUEBEC (NORTH SHORE) ROADS.

By the Act 9th Geo. IV., cap. 17, of the 14th March, 1829, His Excellency the Governor was authorized to appoint five fit persons to be Commissioners, to superintend, manage and control the performing of all the repairs on the following highways, and a sum of £4,050 was appropriated for that purpose. Out of this sum, that of £3,000 was applicable to repairing of: 1st. The highway leading from Dorchester Bridge towards *Beauport*, as far as the premises of the late Jacques Parent. 2nd. From Dorchester Bridge as far as the foot of *Charlesbourg* Hill. 3rd. From western line of city, at the west end of St. Vallier Street, towards *St. Ambroise*, as far as the premises of Honorable Justice Kerr. 4th. From the western extremity of the road last mentioned, and across Scott's Bridge, thence along north side of River St. Charles towards *St. Ambroise*, as far as Route Sinclair or St. Joseph, leading towards Charlesbourg. 5th. From the western extremity of the road leading to *St. Ambroise*, from the west end of St. Vallier Street to the premises of Honorable Justice Kerr, along the south side of River St. Charles, as far as premises of Jacques Fluet. 6th. From western line of the city, at the west end of St. John Street, towards *Cap Rouge*, as far as the church of Ste. Foy. Out of the above appropriation, £300 to be applied in improving and repairing: 1st. The *Route Sinclair*, or St. Joseph, along north side of River St. Charles, from premises of Widow Jacques Bellet, west of Scott's Bridge, as far as Charlesbourg. 2nd. The *Route de la Misère*, west of the *Route Sinclair*, along north side of River St. Charles, at premises of Ant. Allard, to *St. Ambroise*. And out of the said above appropriation the sum of £250 was applicable to make a new Road and Bridges from *Roche Platte*, at the River Jacques Cartier, to the north end of the highway leading from Quebec to *Charlesbourg*. And, lastly, £500 to make a road from *St. Cloud* into the Seigniory of Notre Dame des Anges, into the township of Stoneham, by the nearest convenient course.

By the Act 4th Vict., cap. 17, of 30th January, 1841, His Excellency the Governor was authorized to appoint not less than five and not more than nine Trustees, by Letters Patent under the Great Seal of the Province, for the purpose of opening, making and keeping in repair the roads hereinafter specified. The duties and powers of the Trustees extend to the following roads:—

1st. The *Cove* or *Beach road*, between the Cliff and the River St. Lawrence, from the City boundary to the south-west extremity of Sillery Cove.

2nd. The *St. Louis road*, or "La Grande Allée," and the continuation of the same, from the City boundary to the north-east extremity of the bridge over Cap Rouge river and works appertaining thereto; also the public cross road, open at New Kilmarnock, and leading from St. Louis road to said Cove or Beach road.

3rd. The *St. Foy road*, from City boundary to a point 190 yards beyond the place where it is intersected by the following road.

4th. The *La Suède road*, from its intersection with the preceding road to the foot of the Hill called "La Côte de Champigny."

5th. The road which joins the last-mentioned road, from its junction to the south-west side of Hough's farm, beyond the point of its intersection by the road which crosses it nearly at right angles, and leading downwards towards the Cap Rouge Mill, and upwards towards the "Grand Désert."

6th. The Main Road, from the City boundary in St.Vallier's suburbs (near the road leading to the General Hospital), along the south bank of the River St. Charles, across Little River, and to the point where this road is intersected by the road leading to the Red Bridge, or Commissioners' Bridge.

7. The road from the City boundary, near the north end of Dorchester Bridge, to the Bridge over River Montmorency, near the Great Fall—certain tolls to be levied on these roads.

The above Trustees may be Commissioners for carrying into effect the Ordinance 4th Vict., c. 21, regulating the tolls on the Cap Rouge Bridge, which shall be held to be part of the roads and bridges under their control and management. The Trustees are also authorized by this Act to raise any sum, not exceeding £25,000 currency, by way of loan, on the credit and security of the tolls authorized to be imposed and levied by this Act—Debentures to be issued for such loan. The Trustees are also authorized to raise further sums to pay off the principal of any loan becoming due, or the interest thereon—the Receiver General advancing the money. The application of such moneys to be accounted for to Her Majesty through the Lords Commissioners of Her Majesty's Treasury for the time being.

By the Act 4–5 Vic., cap. 72, of the 18th Sept., 1841, the provisions of the Ordinance 4 Vic., cap. 17, are extended to the road leading from the road mentioned as 6th in the preceding Act or Ordinance, to Scott's Bridge inclusively, and to the main road along the north bank of the River St. Charles, from Scott's Bridge to the Red Bridge or Commissioners' Bridge inclusively.

The Act 7 Vic., cap. 14, of 9th Dec., 1843, exempts vehicles conveying manure from the cities and towns of this Province, from the payment of tolls on turnpike roads, and mentions certain other exemptions. This Act does not extend to any private toll bridge.

The Act 8 Vic., cap. 55, of 29th March, 1845, amends the Ordinance 4 Vic., cap. 17, as follows: A loan of £8,882 currency, is authorized to be raised by the trustees, for the purposes of the said Ordinance; new rates of tolls are established, and provision is made that if Dorchester Bridge, on River St. Charles, should at any time be acquired by the Provincial Government, and placed under the control of the trustees, the toll gate then placed at the entrance of the road leading to Beauport, shall be removed to the end of said bridge, and the tolls payable at such gate for the use of the road and bridge shall not be greater by more than one-half than the tolls which will be then payable at any other toll gate, and shall be subject to commutation; and that the then Charlesbourg Road up to the Church of Charlesbourg shall come under the operation of the said Ordinance as hereby amended, and under the care, control and management of the said trustees of the Quebec turnpike roads. The provisions in the said Ordinance as hereby amended, shall extend to the road leading from Champigny Hill (this hill included) to the Red Bridge or Commissioners' Bridge. A Schedule of tolls is annexed to this Act.

By the Act 9th Vic., cap. 68, of 9th June, 1846, the schedule of tolls annexed to the Act 8th Vic., cap. 55, is repealed, and the schedule annexed to this Act is substituted; and the Kilmarnock Toll Gate removed.

By the Act 12th Vic., cap. 115, of 30th May, 1849, the trustees are authorized to raise £25,000, currency, by way of loan, to enable them to purchase the Dorchester Bridge and its appurtenances; and the following roads are placed under the control of the trustees, viz: 1st the road from Dorchester Bridge to the church of *Charlesbourg*; 2nd, the road from the Bridge on River *Montmorency*, near the Great Fall, up to the line of division between the parishes of *L'Ange Gardien* and *Château-Richer;* 3rd, the road from the church of Charlesbourg up to the Indian Village of *Lorette;* 4th, the road from Lorette village to the *Route de l'Eglise*, in the parish of St. Ambroise; 5th the *Route de l'Eglise;* 6th, the road called *L'Ormière*, from its junction with the Route de l'Eglise to the point where it meets the road leading to Champigny Hill, up to the Red Bridge, or the Commissioners' Bridge; 7th the road called *Ste Foy* road, from a point within 100 yards from the point where it is crossed by the *La Suede* road, to the summit of Cap Rouge hill; 8th, the road from *Ste Foy* road, near Ste Foy church, to the *St. Louis*, or Grande Allée road; 9th, the *Cove* or beach road between the cliff and the River St. Lawrence, for a distance of a mile and a half beyond the south western extremity of Sillery Cove; 10th, the road from Charlesbourg church to the Village St. Pierre, for a distance of one mile and a half only; 11th, the road from the south-west side of Hough's farm, for a distance of one mile towards the church of *St. Augustin.*

By the Act 13-14 Vic., cap. 102, of 10th August, 1850, the trustees are authorized to apply £15,000 to make the roads mentioned in the preceding Act, and £10,000 to purchase the Dorchester Bridge, as authorized and provided for in the preceding Act.

By the Act 14-15 Vic., cap. 132, of 30th August, 1851, the Quebec Turnpike Road Trustees are authorized to effect a new loan of £15,000 (but without guarantee on the part of the Province) to macadamize,—1st, the road from *Charlesbourg,* commencing from the mile and a half to be made under former Act 12 Vic., cap 115, as far as the land of Frs. Lafrance, and thence in two directions, that is to say, 2 miles in a north easterly direction towards Lake Beauport, and 4½ miles in a north westerly direction towards the township of Stoneham,—and, 2nd, the road leading past the Government Grist Mill, in *Ancienne Lorette,* to the road between the Seigniories of St. Gabriel and Gaudarville, from its junction with the public road already under the control of the trustees for a distance of of 1½ miles.

The trustees are also empowered to apply any unexpended money raised by loan under this Act, to repair and macadamize also the *Route de la Misère* or *Route St. Jacques,* from the road on the northern bank of River St. Charles to the road leading to the church of St. Ambroise, and the new road between Charlesbourg and St. Ambroise.

By the Act 14-15 Vic., cap. 133, of 30th August, 1851, the trustees of the Quebec Turnpike Roads are authorized to purchase and rebuild the Montmorency Bridge, and for that purpose to borrow a sum not exceeding £5,000, currency, at a rate not exceeding six per cent. per annum.

By the Act 16 Vic., cap. 235, of 14th June, 1853, the provisions of the Ordinance 4 Vic., cap. 17, are extended to the road from the parish church of St. Ambroise de la *Jeune Lorette* to *St. Gabriel de Valcartier* church, near River Jacques Cartier. The trustees to erect toll bridge over River Jacques Cartier. The provisions of said Ordinance to extend to the road called *Chemin de Foulons* or Cove Beach road, from the place where it is now planked and improved and extending to the foot of Cap Rouge road, being about 3 miles; the provisions of said Ordinance to extend also to the following roads, viz.:—

1st. To the *Mail-road* between Quebec and Montreal, in the direction of St. *Augustin,* for five miles beyond the place to which it is now provided that this road shall be macadamized. 2nd. The by-road, called the *Belvidère Road,* which leads from Grande Allée Road to Ste. Foy Road. 3rd. A by-road to be opened *between Ste. Foy Road and* the *Road* along *Little River St. Charles.* 4th. The by-road, called *Ste. Claire Road,* commencing at Scott's Bridge, as far as the St. Joseph Road. 5th. The *Bourg Royal* by-road, and also *Route de la Commune,* commencing at the Beauport highroad, for a distance of 2 miles. 6th. The by-road which leads to *Laval,* commencing at the Beauport highroad, for 3 miles. 7th. The road leading from the St. Louis Road to the Cove Beach road, passing by the Church of St. Richard. 8th. A road to be opened to connect the North road of little river St. Charles with the Charlesbourg Road. 9th. The highroad in the County of Montmorency, commencing at the *Petit Pré* and extending to the *Saut-à-la-Puce,* and also the approaches to the new bridge to be constructed on River Montmorency; and 10th, to the road continuing the road from the Church in Ste. Foy, to the Cove Beach road.

The Trustees are empowered thereby to apply £3,000 currency, to construct another bridge over the River Montmorency, over and above the balance arising from the loan authorized by the Act 9th Vic., cap. 133.

The Trustees are also authorized to raise a sum of £30,000 currency, by way of loan, to make and complete the roads above mentioned.

QUEBEC SOUTH SHORE ROADS.

The provisions of the same ordinance are hereby extended also to the following roads, which are on the south shore of the River St. Lawrence, to wit:

1st. The road commencing on the bank of the River St. Lawrence, opposite to the City of Quebec, at the *Passage de Bégin,* and extending to *Beaumont,* passing by *La Petite Route,* for 3½ leagues. 2nd. The road from said bank, ascending towards *St. Anselme,* and passing by the *Trente Sous Road,* and by the Church of *St. Henri,* for 4½ leagues. 3rd. The road from said bank, extending to *St. Nicholas,* leading along the shore a distance of three leagues. 4th. The road from *Lauzon Wharf,* on said bank, ascending along the River St. Lawrence, a distance of three leagues, and to build a bridge over River Chaudière.

The Trustees are authorized to raise £40,000 currency, to make the four preceding roads and said bridge.

The Governor authorized to appoint three more Trustees, making 12 in all.

By the Act 18th Vic., cap. 160, of 30th May, 1865, the powers of the said Trustees are extended to the bridge over River Etchemin, on the road leading to St. Nicholas, and to the immediate construction of a bridge over River Chaudière, and the tolls leviable are thereby increased.

By the Act 20th Vic., cap. 125, of 10th June, 1857, the Quebec Turnpike Roads are divided into two separate Trusts, to be called respectively the *Quebec North Shore Turnpike Road Trustees,* and the *Quebec South Shore Turnpike Road Trustees,* the roads on the North shore of the River St. Lawrence being thereby placed under the control of the former, and the roads on the South shore, under that of the latter. The North Shore Trustees are thereby empowered to borrow £4,500 currency, to repair or rebuild the Montmorency bridge, and to pay out of the revenue of the bridge, so rebuilt, £10 yearly to the six minor children of Ignace Côté and Magdeleine Drouin, his wife, from the day of the death of their said father and mother by the fall of the Montmorency bridge, up to their age of majority. The said North Shore Trustees empowered also to borrow £5,500 currency, to pay Charles Rhéaume. The South Shore Trustees are thereby authorized to borrow £7,000, to complete the roads, &c., on the South shore of the river, and £5,000, to build the River Chaudière bridge.

The Act 23rd Vic., cap. 69, of 19th May, 1860, amends the Act 18 Vic., cap. 160 as regards the tolls.

LONGUEUIL AND CHAMBLY TURNPIKE ROAD.

By the Act 57 Geo. 3, cap. 13, of 22nd March, 1817, a sum of £500 was appropriated to establish this road under the direction of Commissioners for the Internal Communication for the County of Kent.

By the Act 4 Vic., cap. 16, of 27 Jan., 1841, the Governor was authorized to appoint Trustees by Letters Patent, under the Great Seal of the Province, for the purpose of opening, making, &c., certain roads, &c., under the name of the Trustees of the Longueuil and Chambly Turnpike Road. These Trustees were authorized, by this Act, to raise a sum of £15,000 by way of loan, on the credit and security of tolls to be levied under this Act, for the purpose of constructing and maintaining a sufficient turnpike road between some point near the village of Longueuil, and the said Canton of Chambly, with a branch road to a point on the Basin of Chambly, near the entrance of the Chambly Canal to the said Basin.

By the Act 7 Vic., cap. 14, of 9th Dec, 1843, certain exemptions from tolls were made on these roads.

By the Act 8 Vic., cap. 56, of 29th March, 1845, another road, that is to say, a road along the Basin of Chambly, from the ferry on the said basin to the plank road leading to the Fort or Canton of Chambly, was included. And the Trustees were authorized to raise £4000 currency, by way of loan.

By the Act 13–14 Vic., cap. 106, of 10th August, 1850, this road was vested in the Board of Works.

By an Order in Council (No. 1091) of 26th March, 1852 this road was sold to a Joint Stock Company, composed of Messrs. Yule, Ostell, Wilson, Dampier, and Perrault, for £150. This sale was confirmed by another Order in Council (No. 1186), of 19th April, 1853, authorizing this Company to buy tolls on this road.

By another Order in Council (No. 1422), of 26th May, 1856, this road was resumed by Government.

On the 11th May, 1858 (See Canada *Gazette* page 897), this road was transferred to the Municipal Councils of the Village of Longueuil, Basin of Chambly, and Canton of Chambly, for 5 shillings.

TURNPIKE ROADS, &c., NEAR MONTREAL.

The Act 45 Geo. III, cap. 11, of 25th March, 1805, establishes a Toll or Turnpike, for improving and repairing the road from the City of Montreal to Lachine, through the wood. The Governor is authorized thereby to appoint nine fit persons (who, with every person who has contributed or shall contribute £10 currency, or upwards, towards improving and repairing said road), should be Trustees for improving, ordering and keeping in repair the said road. The Trustees empowered to levy tolls. It provides, also, that all persons liable to annual labour on this road, to repair the same, may compound and be exonerated from such labour and repair, by paying to the Trustees 5s for each day's labour of a horse, cart and driver, and 1s 8d for each day's labour of a man, to which such person is liable, &c. The Trustees authorized to borrow £500, to improve and repair the road. This Act to be continued for 21 years.

The Act 9, George IV, cap. 18, of 14th March, 1829, authorizes the Governor to appoint three persons as "Commissioners," and to advance to them £3,000, out of unappropriated moneys in the hands of the Receiver General, for the purpose of improving any of the highways terminating at the City of Montreal, in the neighbourhood thereof, but beyond the limits of the 100 chains, (*cent chaines*) and within the parish of Montreal only; such improvements to consist in covering the roads with stone, according to McAdam's system, to the width of not more than 14 feet, and to the depth of eight inches, except the hills, which may be lowered or levelled, and shall not be so covered with stone. Persons then bound by law to keep and repair the road in front of their property, are hereby bound to level the same, and to make ditches on each side of the road, so as to be fit to receive the layers of broken stone to be placed thereon.

The Ordinance of the Special Council, 3rd Vic., cap. 31, of 15th June, 1840, authorizes the Governor to appoint, by Letters Patent under the Great Seal of the Province, not less than five and not more than nine persons, to be *Trustees* for the purpose of opening, making and keeping in repair the following roads, viz: 1st. The upper *Lachine Road*, from the city boundary, towards the south west, to the upper entrance of the Lachine Canal, and the continuation of this road towards Pointe Claire, 200 yards above and beyond the upper entrance to the Lachine Canal. 2nd. The main road from the city boundary, towards the North East, to the Ferry over River des Prairies, at the place called Bout-del'Ile, in the parish of *La Pointe aux Trembles.* 3rd. The Côte des Neiges Road, from the city boundary, towards the North West, to *L'abord à Plouffe,* on said River des Prairies. 4th. The continuation of St. Lawrence Street, leading North Westerly from the city boundary to *Mile End* Tavern, and thence in the same direction to a point on River des Prairies, at *Sault au Récollet.* 5th. The *Côte Ste. Catherine,* from Côte des Neiges Road to the Mile End Road, and thence to the Victoria Road. 6th. The *Victoria Road,* from the city boundary, towards the North East, running to the North West, until it joins the Côte Ste. Catherine Road. 7th. The *Lower Lachine* Road, from the city boundary, towards the South, to and 100 yards beyond its junction with the cross-road leading from said Lower Lachine Road to the Upper Lachine Road, at or near Village of St. Henri. 8th. The *cross-road,* last above mentioned, and throughout its whole length as above defined. 9th. The said *Lower Lachine* Road, from a point 100 yards below, and to the Eastward of the Church of St. Michel de Lachine, to its junction with the Upper Lachine Road. The powers of the Trustees are defined, as well as the tolls to be imposed on these roads. The Trustees are thereby authorized to raise a sum not exceeding £35,000 currency, by way of loan, on the credit and security of such tolls. The Governor also is authorized to purchase, for the public use of the Province, within three years from the passing of this Ordinance, from the Trustees, debentures by them made out for the aforesaid sum, to an amount not exceeding £20,000 currency, to be advanced by the Receiver General to the Trustees, and afterwards to be repaid by the Trustees, as provided in this Ordinance.

By the Ordinance of the Special Council, 4th Vic., cap. 7, of the 31st December, 1840, the provisions of the preceding Ordinance are amended and extended to certain other roads, to wit: 1st, *Côte St. Antoine* Road, from City boundary, towards the south west, to the point where this road strikes the road leading from Upper Lachine Road, in a north west direction, (called the Côte St. Luc Road),—2nd, the last mentioned road (now called *Côte St. Luc* Road) from the point of its departure from the Upper Lachine Road, in a north west direction, to its intersection with the Cross-Road running north easterly to the Côte de Neiges Road, and the said Cross-Road from its point of junction until it strikes the Côte des Neiges Road.

The trustees are also authorized to open, make, and keep-up a road from a point within 100 yards of the Stone Windmill at the eastern end of the Village of St. Henri (Tanneries des Rollands) on the Upper Lachine Road to the main front road of the Concession of *La Côte St. Paul,* and thence along said front road to within 100 yards of McNaughton's farm, from which point the road may be carried across to a point on the Upper Lachine road at the *Petit Village de Lachine,* on the Lower Lachine Road; they may also continue this road in a south westerly direction to a point at or near the Lachine Canal Bridge, or otherwise.

The trustees are also authorized to raise £12,000, currency, by way of loan, on the security of the tolls to be hereby levied, and this, in addition to the £35,000 authorized by the preceding Ordinance.

COTE ST. MICHEL ROAD, UNDER A COMPANY.

The Ordinance, 4th Vic., cap. 22, of the 6th February, 1841, provides for the improvement of the *Côte St. Michel* road, and incorporates "The St. Michel Road Company,' and authorizes them to raise a capital stock of £2,500, currency, in shares of £25 each, and a further sum of £500, if the former sum is found insufficient to improve, complete, and maintain this road.

The above Ordinance, as well as the Act 7th Vic., cap. 14, of the 9th December, 1843 which exempts from tolls on this road, the vehicles conveying manure from cities and towns in this Province, did not then form part of the Montreal Turnpike roads.

The Act, 4-5 Vic., cap. 35, of 18th September, 1841, repeals the 8th, 10th, and 11th sections of this Ordinance of Lower Canada, 3 Vic., cap. 31, above, and provides that the nine several roads mentioned in the Ordinance, 3rd Vic., cap. 31, and the 2 roads mentioned in the Ordinance, 4 Vic., cap. 7, shall, in regard to the tolls to be levied thereon, be considered as one continuous road, and contains a schedule of the highest tolls to be imposed thereon.

The Act 9 Vic., cap. 67, of 9th June, 1846, amends the Ordinance of 3rd Vic., cap. 31, and extends the provisions of the 7th section thereof, and the powers of said trustees to the following roads:—1st, the road from the western extremity of the Lower Lachine Road to the macadamized road eastward of the church of *St. Michel de Lachine,* along the south shore of the Island of Montreal; 2nd, the road from the west end of *Upper Lachine Road* to the Lock at *Ste Anne,* along the south shore of the Island of Montreal; 3rd, the road from the *Abord-à-Plouffe* road to the village of *Ste Geneviève,* along the north shore of the Island of Montreal; 4th, the road in parish of *St. Laurent,* connecting the turnpike roads leading from Montreal to *Abord-à-Plouffe* and Sault-au-Récollet, which roads shall form a continuous road.—On these roads tolls will be levied, as under the Act 4–5 Vic., cap. 35,—trustees authorized to raise a further sum of £27,000, currency, by way of loan, on the security of said tolls.

The Act 12 Vic., cap. 120, of 30th May 1849, authorizes the trustees of the Montreal turnpike roads to purchase, from The St. Michel Road Company, the Côte St. Michel Road, namely: 1st, The road from the end of the Victoria Road, crossing and following the Côte de la Visitation and the Côte St. Michel, in the Parish of Montreal, and crossing and following part of the Côte St. Michel in the parish of the Sault-au-Récollet, up to the Côte St. Michel Bridge. 2nd, The road to be opened and made from the front road of the Côte St. Michel, in the Parish of Sault-au-Récollet, to the church of the Village of Sault-au-Recollet; and to issue debentures up to a sum of £2,000 currency, redeemable in ten years, with interest at 6 per centum per year, to pay and indemnify the said Company. These roads to be considered as a continuous road, and form part of the turnpike roads in the preceding Acts mentioned.

The Act 13–14 Vic., cap. 103, of the 10th August, 1850, authorizes the Trustees of the Montreal Turnpike Roads, the Trustees of the Quebec Turnpike Roads, and the Trustees of the Longueuil and Chambly Turnpike Road, respectively, within three years from the date of this Act, to exchange their debentures for debentures amounting in the whole to a like sum, but being respectively for smaller sums, not less than £5 each, to facilitate the selling or assigning of same.

By the Act 25 Vic., cap. 77, of 9th June, 1862, the Turnpike Road Company of Ile Jésus was incorporated, for the construction of certain turnpike roads and bridges in Ile Jésus, in the County of Laval.

By the Act 27 Vic., cap. 32, of 15th October, 1863, the *Victoria Road* is declared to be a separate road, and not to form part of the other turnpike roads near Montreal. The Trustees of the Montreal Turnpike Roads continue to have control of that road, and to levy the tolls thereon, to be proportioned according to 4-5 Vic., cap. 35.

The Trustees are also authorized to acquire the St. Michel Turnpike Road from the St. Michel Road Company, which, when acquired, shall form one continuous road with the Victoria Road.

Certified, H. A. FISSIAULT.

OTTAWA, 17th December, 1867.

APPENDIX No. 58.

ORDNANCE PROPERTY.

By an Ordinance of the Special Council, 2nd Vic. (3), cap. 21, of the 14th March, 1839, it is enacted, that whereas it might be expedient, that all lands, messuages, &c., in Lower Canada, taken or purchased, or to be thereafter taken or purchased for the use of Her Majesty's Ordnance, and placed under the control of the Ordnance Department, or of the Governor or Commander of Her Majesty's Forces in the Province, which might not be wanted for the service of that Department, should be sold or disposed of, and for that purpose the same were vested in the principal officers of Her Majesty's Ordnance in Great Britain, for the time being and their successors in office. This Act to continue in force until 1st November, 1842, and no longer.

The Ordinance of the Special Council, 3rd Vic., cap. 18, of the 12th May, 1840, renders the preceding ordinance permanent.

By the Act of the Parliament of the Province of Upper Canada, 3rd Vic., cap. 16, of 10th Feb., 1840, the Governor of Upper Canada is empowered to authorize any general officer or person appointed by the Commander in Chief, to cause surveys to be made of any ground which may be required for the erection of any fort, barrack, battery, or other military work, and to cause the same to be marked out and purchased.

By the Act of the Provincial Parliament, 7 Vic., cap. 11, of the 9th Dec., 1843, the two ordinances and the Act of Upper Canada above-mentioned are repealed, and all castles, forts, lines or other fortifications, messuages, lands, lands covered with water, beaches, beds of rivers, canals and works, and all tolls, rates and dues to become payable in respect of the Rideau Canal (for which the Governor may make By-laws and Regulations), and all other real property already or which may thereafter be set apart from the Crown Reserves or other Crown Lands and Property in Canada, or from the Clergy Reserves therein, or otherwise acquired or purchased, in Trust for Her Majesty or Her Royal Predecessors, and paid out of the funds provided for that purpose by the Parliament of the United Kingdom, which may not be wanted for the service of the Ordnance Department, or for the Military Defence of the Province, are thereby vested in the principal Officers of Her Majesty's Ordnance, in Great Britain, for the time being, in Trust for Her Majesty, Her Heirs and Successors; but all such property as may have been purchased or acquired with funds provided by the Legislatures of Upper or Lower Canada, or of the Province of Canada, or any lands or other real property belonging to the Civil Government of Canada, are exempted herefrom, and shall continue to be the property of the said Provincial Government. Certain powers are granted to the principal Officers of Her Majesty's Ordnance. A Schedule of the lands herein referred to is annexed to this Act.

The Act 9th Vic., cap. 42, of 9th June, 1846, re-invests in Nicholas Sparks all the land taken from him at Bytown, except so much thereof as is actually occupied as the site of the Rideau Canal, as originally excavated at the Sapper's Bridge, and of the Basin and By-Wash, as they stood at the passing of the Ordnance Vesting Act, (7th Vic. cap. 11 of 1843) and excepting also a tract of 200 feet in breadth on each side of the said Canal, the portion of the said land so excepted having been freely granted by the said Nicholas Sparks, to the late Colonel By, of the Royal Engineers, for the purposes of the said Canal, and excepting also a tract of sixty feet round the said Basin and By-Wash (wherever the present Ordnance boundary stones stand beyond that distance from the said Basin or By-Wash, but where they stand within that distance then they shall bound the tract so excepted,) which is freely granted by the said Nicholas Sparks to the said Principal Officers, for the purposes of the said Canal.

By the Act 18th Vic., cap. 91, of the 30th May, 1855, (Her Majesty's Secretary of State for the Colonies having informed His Excellency the Governor General that the Imperial Government was willing to surrender to the Province all the Ordnance Lands and all Naval and Military Reserves therein, except such portions thereof at Kingston, Montreal, and Quebec, as are essential to the military defence of the Colony by Her Majesty's troops, on the understanding that the Provincial Government make ample provision for the maintenance of peace and order in the Province), His Excellency the Governor General was authorized to *accept such transfer by Order in Council* on such terms and conditions as might be agreed upon between the Principal Officers of Her Majesty's Ordnance, or the Commissioners for executing the office of Lord High Admiral of the United Kingdom of Great Britain and Ireland, and the Governor of this Province. The lands were to be divided into three classes, that is so say: Class A, to include lands in Kingston, Montreal, and Quebec, retained for occupation by Her Majesty's troops; class B, lands, &c., to be retained for the defence of the Province; and, class C, lands, &c., which might be sold, leased, or used as the Governor in Council might deem advisable.

The Act 19th Vic., cap. 2, of 21st April, 1856, authorizes the Governor in Council to pay out of the Consolidated Revenue Fund, a Life Annuity, not exceeding £4 sterling, per annum, to each of the 500 Military Pensioners located upon certain Ordnance Lands at Toronto, London, and Niagara, and a like annuity to each of the 200 Military Pensioners located upon Ordnance Lands at Penetanguishene, Amhertsburg, and Fort Erie, in lieu of all claims of the said Pensioners upon these lands, in consequence of the transfer of the said lands to the Province.

The Act 19th Vic., cap. 45, of the 19th June, 1856, repeals the Act 7th Vic., cap. 11, and transfers to one of Her Majesty's Principal Secretaries of State, the powers, estates, and property described in the 1st Schedule to this Act, now vested in the Principal Officers of Her Majesty's Ordnance, and vests those certain other parts of the Ordnance estates and property also formerly vested in Her Majesty's Principal Officers which are described in the 2nd Schedule to this Act, in Her Majesty the Queen, Her Heirs and Successors, for the benefit and public uses of this Province, viz:—

THE FIRST SCHEDULE,

Referred to in this Act, being the Schedule of Military Lands in Canada, to be vested in one of Her Majesty's Principal Secretaries of State.

Quebec.—The Citadel of Quebec, fortifications, glacis, barracks, lands, with the appurtenances thereunto in any manner belonging, and the barracks known as the Jesuit Barracks, and the several Public Offices occupied for the various military purposes, and all other military properties at that station.

Montreal.—The barracks, public offices, lands, heretofore held or purchased by the Ordnance for the erection of barracks, or for the defence of the Province, together with the Island of St. Helens in the River St. Lawrence, as heretofore held by the Principal Officers of the Ordnance for various military purposes, with the exception of a parcel of land at Longueuil which has been purchased for the purpose of a *tête de pont*, which is to be retained until an adequate quantity of land is substituted by the Province in lieu thereof, in the vicinity of the projected bridge across the St. Lawrence; and, also, with the exception of the Old Barracks at Montreal, which are to be retained until barracks shall have been constructed for the accommodation of one thousand men, on a site to be approved by the Military Authorities.

Kingston.—All the military works on the east and west of the harbour, and the lands connected with them not named in the second Schedule.

Niagara.—Fort Missisagua, with its glacis, and other appurtenances.

Sorel.—The barracks, Government Cottage, and land required for defence.

THE SECOND SCHEDULE,

Referred to in this Act, being the Schedule of Military Properties in Canada proposed to be transferred to the Provincial Government.

SITUATION.	Approximate Quantity of Land.			Description of Buildings or Military Works.
	Acres.	Rds.	Per.	
Témiscouata	11	2	10	Stockaded Barrack.
Three Rivers	3	2	9	Barrack and Fuel Yard.
Sorel	45,220			Seigneurie, Domain, and other appurtenances.
Montreal				Old Barracks, Parcel of Land for *tête de pont* at Longueuil, so soon as the conditions set forth in the first Schedule shall have been complied with.
Laprairie	42	1	8	Barracks for Cavalry, Artillery, and Infantry.
St. John's	176			Infantry Barracks and Old Fort.
Ile-aux-Noix and Sorel River	295			Fort Lennox, and Reserve.
Chambly	157	1	22	Old Fort, Barracks for Cavalry, Artillery and Infantry, with Barrack-master's house, &c.
Chateauguay	5		1	Block-house.
Cascades	9		12	Wood Yard, Common and Canal.
Cedars		2	23	Store-house and Wharf.
Côteau du Lac	15	3	39	Fort.
Cornwall	1			Fuel Yard.
Prescott	74			Fort Wellington.
Grant's Island, Brockville		2	32	Block-house.
Kingston	180	3	4	Lot 23, or Herchmer Farm.
	11	2	10	Gore between lots 23 and 24.
	11	1	31	Parts of lot 24.
	15			
	6	2	8	
		2		Lots 19, 21 and 22, Place d'Armes.
		2	16	Lots 23, 24 and 25, do
	4		8	Late Commandant's Quarter, and lots 286, 382 & 413.
	3	1	5	Old Tannery.
	44	3	17	Ferguson Property.
	110			Horse Shoe Island.
	1			Snake Island.
	100			Kingston Mills, Reserve, &c.
Cape Vesey, Prince Edward County.	1,260			Reserve.
Green Point, Bay of Quinté	100			do
Toronto	502	2	1	Old Fort, New Barracks, Hospital, Bathurst Street Barracks, Commissariat Quarters, Stores, Guard-house and Victoria Square.
Hamilton	178			Reserve, Burlington Heights.
Short Hill's Farm	200			Lots 5 and 6 Con. Pelham.
Niagara	444	2	4	Reserve, Barracks and Hospital. All, except Fort Mississagua.
Queenston	130			Reserve. All, except that sold to the Purchasers of the Hamilton Estate.
Lyon's Creek	3	1		Reserve.
Chippewa	19	3	27	Barrack and Store.
Navy Island				Reserve.
Fort Erie	1,000			do except that located by enrolled Pensioners.
Port Maitland	426			do
Turkey Point	592			do
London	74			Artillery and Infantry Barracks.
Chatham	11	3	8	Infantry Barracks.
Rond Eau	500			Reserve.
Amherstburg, Baisblanc Island	523			Fort, Block and Picket-houses, except as located by enrolled Pensioners.
Fighting Island	1,200			Reserve.
Windsor	4			Infantry Barrack.
Port Edward, Sarnia				Reserve, except land sold to the Contractors of the Grand Trunk Railway.

THE SECOND SCHEDULE,

Referred to in this Act, being the Schedule of Military Properties in Canada proposed to be transferred to the Provincial Government.—*Continued.*

SITUATION.	Approximate Quantity of Land.			Description of Buildings or Military Works.
	Acres.	Rds.	Per.	
Owen Sound	51	.....	.. ...	Reserve.
Nottawasaga	66	......	......	do
Penetanguishene	5,396	2	15	Reserve and Barracks, except that located by enrolled Pensioners, and under license of occupation to Major Ingall.
St. Joseph	450	......	......	Reserve.
St. Mary's Island	170	......	......	do
Rideau and Ottawa Canals	....	......	......	City of Ottawa, Barracks, Block-houses, and adjuncts of the Canals.

By an Order of His Excellency the Governor General in Council, dated 3rd March, 1857, the management of the Ottawa and Rideau Canals is transferred to the Department of Public Works.

The Act 23rd Vic., cap 22, of 19th May, 1860, vests in Her Majesty for the purposes of the Province, certain lands referred to in the 2nd Schedule of the Act 19th Vic., cap. 45, as Reserves at Fort Erie, Amherstburg and Bois-Blanc Island, and Penetanguishene, (which had been excepted as being portions of the said Reserves then located by enrolled Pensioners, and that portion at Penetanguishene then under license of occupation to Major Ingall.)

The same Act enacts, that "that part of the original allowance for Road between "the 1st and 2nd Concessions of the Township of Tay, extending from the southerly "angle of the Reformatory Prison Farm, in the 2nd Concession of said Township, to the "water's edge of the Penetanguishene Harbour, shall cease to be an original allowance for "Road, and shall be and form part of the said Reformatory Prison Farm."

The chapter 24th of the Consolidated Statutes of Canada, is a mere repetition of the Acts 18 Vic., cap. 91, and of 19th Vic., caps. 2 and 45, and of the Schedule annexed to the Act 19th Vic., cap. 45.

NOTE.—As to the lands vested in the Commissioners for executing the office of Lord High Admiral of the United Kingdom of Great Britain and Ireland for Naval purposes, see the Act 14, 15 Vic., cap. 67, of 30th August, 1851, or the 37th chapter of the Consolidated Statutes of Canada.

And the 36th chapter of the Consolidated Statutes of Canada is a repetition of the Acts 7 Vic., cap. 11, and 19, 20 Vic., cap. 45.

APPENDIX No. 59.

VARIOUS ACTS RESPECTING PUBLIC WORKS.

	Year.	
1 Vict., Cap. 9	1838.	Imperial Act—Establishing the Board of Works.
1 Vict., Cap. 52......	do	do do do do do
2 Vict., Cap. 27.......	1839.	do do do do do
2 Vict., (3) Cap. 64...	1839.	Provincial Act, in force under Imperial Act 1 Vict., Cap. 9 do
3-4 Vict., Cap. 38	1840.	Amends 2 Vict., (3) Cap. 64, and do do do
4-5 Vict., Cap. 38......	1841.	Repeals 1 Vict., Cap. 9, and 2 Vict., (3) Cap. 64.
4-5 Vict., Cap. 28....	do	Works formerly vested in Commissioners or Directors are vested in the Board of Works.
9 Vict., Cap. 37	1846.	Former laws amended and consolidated and certain Acts repealed.
10-11 Vict., Cap. 24..	1847.	"*Limitation Act.*" Limits to 9 months (viz: to 28th April 1848) the term for presenting claims for damages caused by Public Works.
12 Vict., Cap. 4.	1849.	Establishes tolls on certain Public Works. The Road from Dundas to Waterloo is placed under Commissioners of Public Works.
12 Vict., Cap. 5......	do	Governor in Council may transfer Public Works.
12 Vict., Cap. 15.....	do	Establishes tolls on St. Lawrence Canals.
13-14 Vict., Cap. 13..	1850.	Commissioners of Public Works may take lands, &c., for Public Works, claims to be filed within 6 months from date of damage—Arbitration.
14-15 Vict., Cap. 53..	1851.	Costs of Arbitration, in Lower Canada, to be taxedby judges of Superior Court.
14-15 Vic., Cap. 57 ...	do	Municipalities can acquire Public Works without limits of Municipality.
16 Vict., Cap. 12	1852.	On action by Crown to recover possession of Public Works, Court may order same to be put in possession of a guardian named by the Crown.
16 Vict., Cap. 160....	1853.	Mode of appointing Arbitrators.
16 Vict., Cap. 190....	do	Section 59—Companies in Upper Canada formed under 13-14 Vict, Cap. 14, may purchase Public Works under 12 Vict., Cap. 5.
20 Vict., Cap. 19......	1857.	Governor in Council may fix tolls on Public Works—Repealed by 22 Vict., Cap. 3.
22 Vict., Cap. 3......	1859.	Previous laws consolidated.
Cap. 28.......	do	Consolidated Statutes of Canada.
24 Vict.. Cap. 4......	1861.	Respecting powers, &c., of Arbitrators.
29 Vict Cap. 7.	1865.	To extend former Acts to Public Works connected with the Defence of the Province of Canada.

8 Vict., Cap. 6.......	1845.	Respecting Riots on or near Public Works.
14-15 Vict., Cap. 76...	1851.	do do do do
Cons., Stat.. Canada..	1859.	Cap. 29. do do do

ROADS AND BRIDGES.

4 Vict., Cap. 8........	1840.	Respecting Témiscouata Portage Road.
12 Vict., Cap. 56.....	1849.	Incorporation of Joint Stock Companies for making roads, bridges, &c.,
13-14 Vict., Cap. 14...	1850.	Relative to do do do do do
13-14 Vict., Cap. 15...	do	As to roads and bridges in cities and towns, &c., or given up by Public Works.
13-14 Vict., Cap. 41....	do	To enable any party to maintain an action for labor performed under Road Acts though expired.
18 Vict., Cap. 100....	1855.	Municipal and Road Act not to apply to roads and bridges under Commissioners of Public Works, until vested in Municipality. Roads and bridges may be acquired by Municipalities.

APPENDIX No. 60.

(*Supplement to Appendix No.* 58, *Pages* 444 to 447.)

ORDNANCE CANALS, OR THE CARILLON, CHUTE À BLONDEAU, GRENVILLE, AND RIDEAU CANALS.

On the 24th of March, 1848, the Master General and Board of Ordnance proposed to transfer the Ottawa and Rideau Canals (Military Works) to the care of the Provincial Government, the management to be confided to a Board to be composed of Civil and Military Officers.

After due deliberation the Provincial Government declared, by an Order in Council, dated May 27th, 1848, that the state of the finances would not warrant the Province in taking charge of these Canals. (See State Book H, page 105.)

In a Despatch, dated the 3rd of March, 1853, the Imperial Government transmitted to the Provincial Government the Copy of a Report of the Board of Treasury, repeating the offer of the former to transfer the Military Canals to the latter, the Imperial Government continuing to defray the cost of maintenance up to the 30th September, 1853.

Pending the settlement of this question, the Provincial Government, by an Order in Council dated May 13, 1853, provided for the maintenance of these Canals, dating from the 1st of October, 1853. (See State Book N, page 220.)

On the 14th of July, 1853, the Imperial Government sent another Despatch on this subject, stating the conditions upon which the Military Canals were to be transferred.

The Provincial Government, in an Order in Council, dated the 14th of September 1853, declared the proposed conditions of transference acceptable, but demanded the absolute control in the management of the Canals and the lands to be transferred with them; they further expressed their belief that it would be proper that the Imperial Government should cede to the Province all the Ordnance Lands in Bytown (Ottawa) not bordering the Canal; they also reiterated their declaration of the 13th of May, previous, to wit: that the Military Canals would be maintained by the Province until the final decision of the question. (See State Book N, page 431.)

Account, presented by the Board of Ordnance for the maintenance of the Military Canals from the first of October to the 31st December, 1853, and approved by Order in Council of the 16th December, 1853. (See State Book N, page 634.)...... £ 1,979 6 3

Do	do	approved	by O. C.,	13th Feb.	1854,	£1,793 7 0	
Do	do	do	do	3rd May,	"	2,375 0 0	
Do	do	do	do	30th Aug.	"	3,215 0 0	
Do	do	do	do	27th Oct.,	"	2,384 11 9	
						———	9,767 18 9

This last Order in Council enacted that every account for this purpose might in future be paid without an Order in Council. (See State Book O, page 82.) We nevertheless find that in the year following an application was made for funds, &c., and was approved by an Order in Council dated 30th January, 1855, to the amount of........................ 1,625 8 3
(See State Book O, page 591.)

The other disbursements for the year 1855 were made directly by the Finance Department, as follow:

February, 1855	£ 572 13 3	
May, "	3,178 0 0	
July, "	3,435 0 0	
November, "	2,701 0 0	
		9,886 13 3

Total Payments by Provincial Government in 1853–54–55 .... £23,259 6 6

In the year 1855, Her Majesty's Secretary of State for the Colonies informed His Excellency the Governor General that the Imperial Government was willing to surrender to the Province all the Ordnance Canals and property described in Appendix No. 58, pages 446 and 447, on the understanding that the Provincial Government should make ample provision for the maintenance of peace and order in the Province; the Provincial Government, by the Act 18 Vic., cap. 91, of 30th May, 1855, authorized His Excellency *to accept such transfer by Order in Council.* (See State Book P, page 15.)

Under the authority of the above cited Act, an Order in Council bearing date the 25th January, 1856, authorized His Excellency to accept such transfer (on the conditions proposed by the Inspector General of Fortifications) of the Ordnance Lands, &c., and the Military Canals, proposing also that a Bill should be presented to Parliament in the ensuing Session in conformity with the Imperial Statute 18th and 19th Vic., cap. 117. (See State Book Q, page 115.)

On the 19th June, 1856, by the Act 19th Vic., cap. 45, the Provincial Parliament ratified the Order in Council of the 25th January, 1856.

In 1856, the expenditure on the Ordnance Canals was also defrayed by the Finance Department out of the Provincial funds, and amounted to £11,073 10 6.

Lt.-Col. W. Coffin was appointed Provincial Agent of the Ordnance Canals and other property in September, 1856, previous to which they remained under the management of the Board of Ordnance.

The Ordnance Canals, or the Carillon, the Chute-à Blondeau, the Grenville, and the Rideau, were placed under the control of the Department of Public Works, by an Order in Council dated the 3rd of March, 1857. (See State Book R, page 225.)

The total expenditure by the Provincial Government on these Canals, from the 1st of October, 1853, up to the 1st of January, 1857, or up to the time they were placed under the charge of the Department of Public Works, amounted to £34,332 17 0=$137,331 40.

The expenditure from the 1st of January, 1857, to the 30th June, 1867, is shewn in Appendix No. 61, at page 451.

For further details respecting transfer of Ordnance Lands and Canals by the Imperial to the Provincial Government, see Appendix No. 58, pages 444 to 447.

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APPENDIX No. 61.

STATEMENT showing the Annual Expenditure for repairs and working expenses on the Rideau, Carillon, Chute à Blondeau and Grenville Canals, from 1st January, 1857, to 30th June, 1867.

	RIDEAU CANAL.			CARILLON, CHUTE A BLONDEAU AND GRENVILLE CANALS.			TOTAL.	RIDEAU CANAL SURVEY.
	Working Expenses.	Ordinary Repairs.	Extraordinary Repairs.	Working Expenses.	Ordinary Repairs.	Extraordinary Repairs.		
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts,	$ cts.
1857	26,866 45	....	....	5,586 40	....	....	32,452 85	....
1858	27,370 30	....	25,692 05	5,940 60	....	....	59,002 95	....
1859	26,898 79	....	599 77	5,373 94	....	....	32,872 50	....
1860	17,213 99	5,097 91	5,474 40	3,693 65	6,398 51	....	37,878 46	....
1861	16,990 46	4,617 59	6,155 12	4,102 20	3,191 48	....	35,058 85	....
1862	17,290 75	5,941 41	37,894 74	4,089 62	3,336 06	356 75	68,909 33	....
1863	17,537 08	5,631 22	1,832 13	4,105 24	4,935 54	3,085 06	37,726 27	600 00
1st January, 1863, to 30th June, 1864	7,295 28	4,457 48	2 80	1,751 12	3,551 16	....	19,604 42	2,546 58
1st July, 1864, to 30th June, 1865	17,889 13	8,584 31	6,809 83	4,263 12	5,213 35	4,615 51	47,375 25	....
1st July, 1865, to 30th June, 1866	18,298 15	9,922 26	1,172 01	4,283 17	1,394 92	7,192 88	42,263 39	....
1st July, 1866, to 30th June, 1867	18,516 11	12,654 56	10,523 01	5,164 38	12,494 37	7,288 05	66,640 48	....
	212,066 49	56,906 74	96,155 86	48,355 44	40,515 39	22,538 25	479,784 75	3,146 58

N. B.—These Canals which are known as the "Ordnance Canals," were placed under the control of the Department of Public Works by an Order in Council, dated the 3rd of March, 1857. (For details respecting transfer—see Appendices Nos. 58 and 60.)

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th June, 1867.

J. BAINE,
Accountant.

APPENDIX No. 62.

STATEMENT shewing the Cost of Construction, Fitting Up, &c., of the principal Light Houses erected by the Department of Public Works, from the Union (10th February, 1841), to the Confederation (1st July, 1867):

No.	Name of Light House.	Situation of Light House.	Description of Building.	Year first lighted.	Cost of Towers and Buildings.	Cost of preliminary Surveys, Vessels conveying workmen and materials, Engineering, Lighting Apparatus, &c.	Total Expenditure since the Union.	REMARKS.
	Below Quebec.				$ cts.	$ cts.	$ cts.	
1	Belle-Ile (Straits)	Gulf of St. Lawrence	Circular stone tower	1858	86,830 00	165,619 90	517,874 15	Out of the sum of $165,619.90, for surveys, lighting apparatus, &c., $150.461.93 are chargeable to light houses Nos. 1, 2, 3, 4, and $15,127,97 to light houses Nos. 6, 7, 8, 9, 10.
2	Forteau (Amour Point)	do	do	1858	86,626 67			
3	Cape Rosier	do	do faced with white fire brick	1858	75,986 70			
4	Anticosti	do	do	1858	72,802 00			
5	Father Point	do	Octagonal wooden tower.	1859	1,453 61			
6	Brandy Pots	do	Circular brick tower	1862	2,871 70			
7	Long Pilgrims	do	do	1862	2,904 10			
8	Kamouraska	River St. Lawrence	Wood, square	1862	2,113 71			
9	Crane Island	do	Wood, octagonal	1862	10,334 42			
10	Bellechase Island	do	Wood, square	1862	1,914 76			
11	Point St. Laurent	do	Wood	Unfinished	8,416 58			
	Above Montreal.							
12	Light Ship No. 1 do 2 do 3	Lake St. Louis	Vessels built of iron	1860 1860 1860	26,397 93	....	26,397 93	The light ship at Pointe Claire was built at the expense of Messrs. Maillefert & Raasloff, and used by them in their survey of the St. Lawrence Rapids in 1854; on the 9th Sept. of the same year, they sold it together with 3 metallic life boats, 1 wooden scow, the rigging and furniture, to the Department, for the sum of $4,746.45, which was charged to the survey.
13	Pte. Claire, Light Ship do Pier Light	River Ottawa do	Vessel do Wood	1860 1860	....	....	....	
14	Green Shoal	do	do	1860	4,101 88	378 16	4,480 04	
15	Snake Island	Lake Ontario	Stone, square	1858	8,611 00	1,819 04	10,430 04	
16	Point Pleasant	do	Wood, octagonal	1866	2,819 42	1,524 70	4,344 12	
17	Point Pelée Reef	Lake Erie	Wood, on caissons filled with stone masonry, in 19 feet water	1861	69,160 30	....	69,160 30	

18	Point Clark	Lake Huron	Stone	1859	14,120 00	140,163 91	222,563 91	
19	Chantry Island	do	do	1859	14,120 00			
20	Isle of Coves	do	do	1859	14,120 00			
21	Griffith Island	do	do	1859	14,120 00			
22	Nottawasaga Island	do	do	1859	14,120 00			
23	Christian Island	do	do	1859	11,800 00			
24	Killarney (2 light houses)	do	Two of wood	Unfinish'd.	3,500 00	188 27	3,688 27	
25	Little Current (2 light h.)	do	do	do				
26	Clapperton Island	do	Wood	do				
27	St. Ignace Island	Lake Superior	do	do				
28	Light keepers' dwellings	Between Montreal and Lake Superior	Generally of wood	....	19,685 91	....	19,685 91	At Grosse Pointe, Lancaster, Coles Shoal, Lindoe Island, Long Point, Lake Erie, Nottawasaga Island, &c.
	Total cost, up to 30th June, 1867			$	568,930 69	309,693 98	878,624 67	

N. B.—Several of the Light Houses below Quebec, not enumerated in the above Statement, and those between Quebec and Montreal, were constructed under the Trinity Houses of Quebec and Montreal.

J. BAINE,
Book-keeper.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 30th June, 1867.

APPENDIX No. 63.

No. 1.—STATEMENT showing the Gross Revenue on the Provincial Canals, from all sources, viz: from Tolls collected on Vessels, Merchandise, Passengers, and from Rents, Storage, Winterage, Wharfage, Damages and Fines, for each year, from 1857 to 1867, inclusive.

NAME OF CANALS.	1857.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz:							
Lachine Beauharnois Cornwall Williamsburgh	7,593 78	54,966 05	2,078 62	*64,638 45	4,513 00	2,317 04	71,468 49
Welland	23,677 93	208,959 28	328 63	† 232,965 84	6,017 11	620 00	239,602 95
Burlington Bay	1,128 75	14,697 43	....	15,826 18	....	....	15,826 18
Ste. Anne Lock	2,211 95	2,240 63	96 78	4,549 36	....	....	4,549 36
Ottawa and Rideau Canals, viz:							
Carillon Chute à Blondeau Grenville Rideau	included in following column.	11,172 20	included in preceding column.	11,172 20	....	....	11,172 20
St. Ours Lock Chambly Canal	1,775 97	10,309 33	42 20	12,127 50	113 00	242 07	12,482 57
Totals	36,388 38	302,344 92	2,546 23	341,279 53	10,643 11	3,179 11	355,101 75

* Not included in above amount, for wheat, flour, &c., passed free, as having paid full tolls on Welland Canal......$ 19,707 05

† do do for iron, &c., do St. Lawrence Canals... 3,826 90

Total......$23,533 95

No. 2. APPENDIX No. 63.—*Continued.*

NAME OF CANALS.	1858.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz:							
Lachine Beauharnois Cornwall Williamsburgh	7,967 78	45,582 42	1,136 51	*54,686 71	47,643 20	1,942 73	104,272 64
Welland	25,167 37	182,876 41	317 52	† 208,361 30	(a) 13,068 19	947 29	222,376 78
Burlington Bay	1,046 00	12,744 89	....	13,790 89	....	....	13,790 89
Ste. Anne Lock	2,283 80	2,512 85	110 76	‡ 4,907 41	....	51 00	4,958 41
Ottawa and Rideau Canals, viz:							
Carillon Chute à Blondeau Grenville Rideau	included in following column.	9,375 85	included in preceding column.	9,375 85	....	....	9,375 85
St. Ours Lock Chambly Canal	1,816 97	‖ 9,715 42	43 62	§ 11,576 01	....	98 37	11,674 38
Totals	38,281 92	262,807 84	1,608 41	302,698 17	60,711 39	3,039 39	366,448 95

* Not included in above amount, for wheat, corn, &c., passed free, as having paid full tolls on the Welland Canal...... ......$9,020 64 otherwise chargeable on this Canal.

† do for iron, &c., do St. Lawrence Canals.. 2,945 03 do do

‡ do do do do 63 90 do do

§ do for 49 tons of Ordnance stores passed free..... 7 35

Total......$12,036 92

(a) Including $3,957 47, for arrears of rent.

APPENDIX No. 63.—*Continued.*

No. 3.—STATEMENT showing the Gross Revenue on the Provincial Canals, &c.

NAME OF CANALS.	1859.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
St. Lawrence Canals, viz:	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Lachine	7,449 41	43,230 58	1,166 94	*51,846 93	18,437 00	2,521 12	72,805 05
Beauharnois							
Cornwall							
Williamsburgh							
Welland	17,795 84	106,610 59	294 39	†124,700 82	10,545 92	4,195 82	139,442 56
Burlington Bay	1,137 75	12,397 15	....	13,534 90	824 05	....	14,358 95
Ste. Anne Lock	2,539 08	2,977 32	137 77	5,654 17	....	5 00	5,659 17
Ottawa and Rideau Canals, viz:							
Carillon	1,536 02	8,799 84	121 17	10,457 03	....	286 87	10,743 90
Chute à Blondeau							
Grenville							
Rideau							
St. Ours Lock	2,282 10	14,060 72	66 66	16,409 48	20 00	91 07	16,520 55
Chambly Canal							
Totals	32,740 20	188,076 20	1,786 93	222,603 33	29,826 97	7,099 88	259,530 18

* Not included in above amount, for wheat, corn, &c., passed free, as having paid tolls on the Welland or Chambly Canals	$4,326 58
† do do iron, &c., do St. Lawrence Canals	1,208 45
Total	$5,535 03

No. 4. APPENDIX No. 63.—*Continued.*

NAME OF CANALS.	1860.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
St. Lawrence Canals, viz:	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Lachine	9,229 53	68,164 64	1,200 10	*78,594 27	9,994 00	2,169 50	90,757 77
Beauharnois							
Cornwall							
Williamsburgh							
Welland	25,092 33	142,725 14	340 22	†168,157 69	7,086 98	2,116 10	177,360 77
Burlington Bay	1,449 00	21,214 98	....	‡22,663 98	....	....	22,663 98
Ste. Anne Lock	2,902 40	3,641 28	143 34	§ 6,687 02	....	....	6,687 02
Ottawa and Rideau Canals, viz:							
Carillon	5,365 70	15,718 03	157 90	‖21,241 63	....	161 74	21,403 37
Chute à Blondeau							
Grenville							
Rideau							
St. Ours Lock	2,789 34	16,375 23	41 07	19,205 64	20 00	82 66	19,308 30
Chambly Canal							
Totals	46,828 30	267,839 30	1,882 63	316,550 23	17,100 98	4,530 00	338,181 21

* Out of this amount..................................$ 65,935 68 were refunded or free by Order in Council, dated 28th May, 1860.

† Under above O. C., 90 per cent of tolls fixed by Tariff were refunded on vessels and goods in certain cases. The amount so refunded is......................$ 16,712 33, making the whole amount of tolls collected on Welland Canal, under Tariff, for this year $184,870.02.

‡ Out of this amount	18,118 86	were refunded or free.
§ do	6,182 59	do
‖ do	20,391 17	do
Total refunded or passed free	$127,340 63	

APPENDIX No. 63.—*Continued.*

No. 5.—STATEMENT showing the Gross Revenue on the Provincial Canals, &c.

NAME OF CANALS.	1861.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz: Lachine Beauharnois Cornwall Williamsburgh	12,678 52	107,287 92	1,935 67	*121,902 11	19,698 68	9,460 45	151,061 24
Welland	25,957 68	204,297 46	273 04	†230,528 18	8,967 20	2,273 00	241,768 38
Burlington Bay	1,539 00	31,260 42	....	‡32,799 42	....	....	32,799 42
Ste. Anne Lock	2,745 95	3,277 43	160 51	§6,183 89	....	12 00	6,195 89
Ottawa and Rideau Canals, viz: Carillon Chute à Blondeau Grenville Rideau	5,617 04	11,962 98	71 53	‖17,651 55	50 50	46 24	17,748 29
St. Ours Lock Chambly Canal	1,265 25	9,028 35	26 27	10,319 87	20 00	199 44	10,539 31
Totals	49,803 44	367,114 56	2,467 02	419,385 02	28,736 38	11,991 13	460,112 53

* The whole not collected as per Order in Council, dated 28th May, 1860	$121,902 11
† Refunded as per do do	55,326 30
‡ The whole not collected as per do do	32,799 42
§ Refunded and passed free as per do do	6,183 89
‖ Not collected as per do do	17,651 55
Total refunded or passed free	$233,863 27

No. 6. APPENDIX No. 63.—*Continued.*

NAME OF CANALS.	1862.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz: Lachine Beauharnois Cornwall Williamsburgh	13,427 83	123,293 41	1,468 59	*138,189 83	12,493 55	9,807 57	160,490 95
Welland	32,823 03	250,613 76	401 29	†283,838 08	7,363 90	593 00	291,794 98
Burlington Bay	1,751 50	35,698 53	....	‡37,450 03	....	....	37,450 03
Ste. Anne Lock	3,021 63	3,743 95	173 65	§6,939 23	....	....	6,939 23
Ottawa and Rideau Canals, viz: Carillon Chute à Blondeau Grenville Rideau	5,815 61	11,980 62	28 50	°17,824 73	....	25 90	17,850 63
St. Ours Lock Chambly Canal	1,764 26	11,270 87	25 93	13,061 06	20 00	....	13,081 06
Totals	58,603 86	436,601 14	2,097 96	497,302 96	19,877 45	10,426 47	527,606 88

* The whole not collected as per Order in Council of 28th May, 1860	$138,189 83
† Not collected as per do do	83,411 73
‡ The whole not collected as per do do	37,450 03
§ do do do	6,939 23
° do do do	17,824 73
Total not collected or passed free	$283,815 55

APPENDIX No. 63.—*Continued.*

No. 7.—STATEMENT showing the Gross Revenue on the Provincial Canals, &c.

NAME OF CANALS.	1863.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
St. Lawrence Canals, viz :	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Lachine	9,169 85	82,427 29	2,085 99	93,683 13	11,888 90	10,833 81	116,405 84
Beauharnois							
Cornwall							
Williamsburgh							
Welland	28,312 18	197,596 77	767 37	226,676 32	8,303 37	4,665 00	239,644 69
Burlington Bay	862 12	16,659 62	123 56	17,645 30	....	....	17,645 30
Ste. Anne Lock	795 70	4,165 65	52 29	5,013 64	....	....	5,013 64
Ottawa and Rideau Canals, viz:							
Carillon	5,254 70	11,538 18	19 96	16,812 84	269 03	....	17,081 87
Chute à Blondeau							
Grenville							
Rideau							
St. Ours Lock	3,128 47	22,230 09	30 42	25,388 98	20 00	....	25,408 88
Chambly Canal							
Totals	47,523 02	334,617 60	3,079 59	385,220 21	20,481 30	15,498 81	421,200 32

REMARK.—The Tolls abolished or reduced, in 1860, on the St. Lawrence, Welland and Burlington Bay Canals, on Ste. Anne Lock and Ottawa and Rideau Canals, were re-imposed this year, by Order in Council of 15th April.—See *Canada Gazette,* at page 1152.

No. 8. APPENDIX No. 63.—*Continued.*

NAME OF CANALS.	1864.*						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
St. Lawrence Canals, viz :	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Lachine	2,587 11	16,959 97	488 11	20,035 19	6,226 51	2,705 84	28,967 54
Beauharnois							
Cornwall							
Williamsburgh							
Welland	9,561 09	54,275 37	250 16	64,086 62	1,181 84	386 00	65,654 46
Burlington Bay	349 74	4,493 28	25 18	4,868 20	....	....	4,868 20
Ste. Anne Lock	193 69	879 21	11 78	1,089 68	....	....	1,089 68
Ottawa and Rideau Canals, viz:							
Carillon	1,660 32	3,274 55	6 64	4,941 51	45 63	80 67	5,067 81
Chute à Blondeau							
Grenville							
Rideau							
St. Ours Lock	883 16	6,163 70	10 69	7,057 55	20 00	....	7,077 55
Chambly Canal							
Totals	15,240 11	86,046 08	792 56	102,078 75	7,473 98	3,172 51	112,725 24

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* 6 months, viz : from 1st January to 1st. July.

APPENDIX No. 63.—*Continued.*

No. 9.—STATEMENT showing the Gross Revenue on the Provincial Canals, &c.

NAME OF CANALS.	1865.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
St. Lawrence Canals, viz :	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Lachine Beauharnois Cornwall Williamsburgh	8,134 77	48,999 62	1,638 85	58,773 24	14,644 32	8,955 67	82,373 23
Welland	23,154 93	143,636 90	676 61	*167,468 44	7,704 21	3,080 98	178,053 63
Burlington Bay	937 46	11,019 07	125 52	12,082 05	....	....	12,082 05
Ste. Anne Lock	843 46	4,329 71	54 54	5,227 71	....	21 00	5,248 71
Ottawa and Rideau Canals, viz:							
Carillon Chute à Blondeau Grenville Rideau	5,037 56	10,254 49	56 77	15,348 82	933 00	213 40	16,495 22
St. Ours Lock Chambly Canal	3,127 40	20,698 12	31 39	23,856 91	20 00	257 89	24,134 80
Totals	41,235 58	238,937 91	2,583 68	282,757 17	23,101 53	12,528 94	318,387 64

* $1,723 06 were refunded out of this amount.

No. 10.

APPENDIX No. 63.—*Continud.*

NAME OF CANALS.	1866.						
	TOLLS COLLECTED ON			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
St. Lawrence Canals, viz :	$ cts.	$ cts	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Lachine Beauharnois Cornwall Williamsburg	8,309 50	52,599 41	2,148 46	*63,057 37	12,612 52	6,116 31	81,786 20
Welland	21,525 34	156,302 60	811 90	†178,639 84	8,981 05	2,904 25	190,525 14
Burlington Bay	903 02	13,734 78	284 82	14,922 62	....	....	14,922 62
Ste. Anne Lock	942 99	5,031 84	55 46	6,030 29	....	....	6,030 29
Ottawa and Rideau Canals, viz:							
Carillon Chute à Blondeau Grenville Rideau	3,847 28	9,475 52	50 68	13,373 48	103 80	119 86	13,597 24
St. Ours Lock Chambly Canal	4,269 41	24,024 43	34 77	28,328 61	20 00	177 16	28,525 77
Totals	39,797 54	261,168 58	3,386 09	304,352 21	21,717 37	9,317 68	335,387 26

* Not included in above amount, for wheat, corn, flour, &c., passed free by Order in Council, having paid full tolls on the Welland Canal	$10,162 95
† Not included in above amount, for iron, salt, &c., passed free by Order in Council, having paid full tolls on the St. Lawrence Canals	4,530 85
Total	$14,693 80

APPENDIX No. 63.—*Concluded.*

No. 11.—Statement showing the Gross Revenue on the Provincial Canals, &c.

NAME OF CANALS.	1867.						
	Tolls collected on			Total Tolls collected.	Rents.	Storage, winterage, wharfage, damages and fines.	Total revenue from all sources.
	Vessels.	Merchandise.	Passengers.				
St. Lawrence Canals, viz:	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Lachine.. Beauharnois Cornwall Williamsburgh	8,841 37	58,313 66	2,417 79	69,572 82	14,931 35	7,596 51	92,100 68
Welland..	21,229 10	150,593 60	664 23	*172,486 93	5,761 27	4,263 90	182,512 10
Burlington Bay	1,073 92	17,631 60	199 02	18,904 54	....	....	18,904 54
Ste. Anne Lock..	1,127 42	6,220 21	51 93	7,399 56	....	14 00	7,413 56
Ottawa and Rideau Canals, viz:							
Carillon Chute à Blondeau Grenville Rideau	4,558 40	11,568 24	63 33	16,189 97	203 09	225 82	16,618 88
St. Ours Lock Chambly Canal	4,959 20	30,101 24	29 44	35,089 88	20 00	482 60	35,592 48
Totals	41,789 41	274,428 55	3,425 74	319,643 70	20,915 71	12,582 83	353,142 24

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* $1,204 16 were refunded out of the above amount.

APPENDIX No. 64.

No. 1.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals,—the Gross Revenue from Tolls Collected thereon, and from all other sources,—the Cost of Maintenance, Management, Collections of Tolls, &c., and the Net Revenue, for each year, from 1857 to 1867 inclusive.

NAME OF CANALS.	1857.									
	TONNAGE.		Total Tonnage.	Gross Revenue.	DEDUCT				Total Deductions.	Net Revenue.
	Vessels.	Merchandise.			Maintenance and Repairs.	Management.	Collections of Tolls, &c	Miscellaneous.		
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz :										
Lachine	690,031	593,652	1,283,683	71,468 49	22,762 64	9,770 43	9,655 98	....	87,103 63	....
Beauharnois					9,721 46	11,049 87	822 00	....		
Cornwall					5,045 41	8,362 67	620 75	....		
Williamsburgh					2,390 14	5,777 28	1,125 00	....		
Welland	1,143,434	901,072	2,049,506	239,602 95	67,324 11	41,126 12	7,660 02	2,545 18	118,655 43	120,947 52
Burlington Bay	142,410	69.751	212,161	15,826 18	....	....	980 00	....	980 00	14,846 18
Ste, Anne Lock	176,956	148,845	325,801	4,549 36	157 50	820 95	644 78	....	1,623 23	2,926 13
Ottawa and Rideau Canals, viz :										
Carillon	....	....	....	11,172 20	....	....	....	....	....	11,172 20
Chute à Blondeau										
Grenville										
Rideau										
St. Ours Lock	158,064	133,687	291,751	12,482 57	7,816 69	1,468 63	400 00	....	27,672 45	....
Chambly Canal					12,024 11	4,334 05	1,628 97	....		
Totals	2,315,895	1,847,007	4,162,902	355,101 75	127,242 06	82,710 00	23,537 50	2,545 18	236,034 74	149,892 03

Deduct excess of expenses over revenue at St. Lawrence Canals	$15,635 14	
Do do St. Ours Lock and Chambly Canal	15,189 88	
		30,825 02
Net Revenue for 1857	$	119,067 01

APPENDIX No. 64.—*Continued.*

No. 2.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1858.									
	TONNAGE.		Total Tonnage.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.
	Vessels.	Merchandise.			Maintenance and Repairs.	Management	Collections of tolls, &c.	Miscellaneous.		
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz:										
Lachine	757,810	605,558	1,363,368	104,272 64	14,059 31	8,466 68	11,407 91	....	82,680 69	21,591 95
Beauharnois					8,285 25	9,459 66	809 88	....		
Cornwall					12,111 85	7,258 46	625 56	....		
Williamsburgh					3,376 32	5,691 78	1,125 00	....		
Welland	1,148,771	855,112	2,003,883	222,376 78	61,960 40	39,007 72	6,784 37	4,578 38	112,330 87	110,045 91
Burlington Bay	153,033	59,254	212,287	13,790 89	....	....	800 00	....	800 00	12,990 89
Ste. Anne Lock	182,703	154,441	337,147	4,958 41	206 00	753 05	629 19	....	1,588 24	3,370 17
Ottawa and Rideau Canals, viz:										
Carillon	310,226	224,241	534,467	9,375 85	....	....	....	....	30,717 64	....
Chute à Blondeau					....	....	....	....		
Grenville					....	....	....	....		
Rideau					3,084 82	27,184 47	448 35	....		
St. Ours Lock	159,823	126,645	286,468	11,674 38	269 73	1,425 18	400 00	....	16,477 84	....
Chambly Canal					6,723 52	6,031 23	1,628 13	....		
Totals	2,712,366	2,025,254	4,737,620	366,448 95	110,077 23	105,281 28	24,658 39	4,578 38	244,595 28	147,998 92
Deduct excess of expenses over the Revenue at Ottawa and Rideau Canals									$21,341 79	
do do do St. Ours Lock and Chambly Canal									4,803 46	26,145 25
Net Revenue for 1858									$	121,853 67

APPENDIX No. 64.—*Continued.*

No. 3.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1859.									
	TONNAGE.		Total Tonnage.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.
	Vessels.	Mer-chandise.			Maintenance and Repairs.	Management.	Collections of tolls, &c.	Miscellaneous.		
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz:										
Lachine	765,636	631,769	1,397,405	72,805 05	10,481 49	10,248 74	10,419 19	....	70,829 46	1,975 59
Beauharnois					2,917 28	9,831 68	795 90	141 28		
Cornwall					6,113 17	8,185 29	628 31	....		
Williamsburgh					4,028 81	5,915 32	1,125 00	....		
Welland	856,918	709,611	1,566,529	139,442 56	37,584 47	40,898 89	8,569 98	....	87,053 34	52,389 22
Burlington	108,068	88,521	196,589	14,358 95	322 63	....	800 00	....	1,122 63	13,236 32
Ste. Anne Lock	203,126	88,696	291,822	5,659 71	....	935 22	631 31	....	1,566 53	4,092 64
Ottawa and Rideau Canals, viz:										
Carillon	323,221	472,505	795,726	10,743 90	9,240 30	23,032 43	50 00	....	32,322 73	....
Chute à Blondeau										
Grenville										
Rideau										
St. Ours Lock	193,052	176,693	374,745	16,520 55	263 95	1,292 00	400 00	....	17,531 06	....
Chambly Canal					7,969, 76	5,969 10	1,636 25	....		
Totals	2,455,021	2,167,795	4,622,816	259,530 18	78,919 86	106,308 67	25,055 94	141 28	210,425 75	71,693 77
Deduct excess of expenses over the Revenue at Rideau and Ottawa Canals									$21,578 83	
Do do do St. Ours Lock and Chambly Canal									1.010 51	
										22,589 34
Net Revenue for 1859									$	49,104 43

APPENDIX No. 64.—*Continued.*

No. 4.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1860.									
	TONNAGE.		Total tonnage.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.
	Vessels.	Merchandise.			Maintenance and Repairs.	Management.	Collections of Tolls, &c.	Tolls refunded or not collected as per Order in Council of 28th May, 1860		
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts. Miscellaneous.	$ cts.	$ cts.
St. Lawrence Canals, viz :—										
Lachine	824,465	733,596	1,558,061	90,757 77	17,253 64	10,755 57	9,446 17	....	142,368 84	....
Beauharnois					3,314 82	9,400 27	795 27	219 61		
Cornwall					5,348 00	8,226 39	630 09	65,935 68		
Williamsburgh					4,125 06	5,793 27	1,125 00	....		
Welland	1,238,509	944,084	2,182,593	177,360 77	23,301 28	43,011 40	6,463 87	....	72,776 55	104,584 22
Burlington Bay	124,076	140,251	264,327	22,663 98	....	....	800 00	18,118 86	18,918 86	3,745 12
Ste. Anne Lock	232,191	204,574	436,765	6,687 02	815 87	934 58	631 56	6,182 59	8,564 60	....
Ottawa and Rideau Canals, viz :—										
Carillon	372,333	344,079	716,412	21,403 37	6,398 51	3,693 65	....	20,391 17	54,291 18	....
Chute à Blondeau						....	....			
Grenville										
Rideau					6,593 86	17,213 99	....			
St. Ours Lock	239,526	217,117	456,643	19,308 30	2,976 18	1,267 95	400 00	....	22,275 28	....
Chambly Canal					10,041 56	5,956 26	1,633 33	....		
Totals	3,031,100	2,583,701	5,614,801	338,181 21	80,168 78	106,253 33	21,925 29	110,847 91	319,195 31	108,329 34

Deduct excess of expenses over collections at St. Lawrence Canals		$51,611 07	
Do do Ste. Anne Lock		1,877 58	
Do do Ottawa and Rideau Canals		32,887 81	
Do do St. Ours Lock and Chambly Canal		2,966 98	
			89,343 44
Net Revenue for 1860		$	18,985 90

APPENDIX No. 64.—*Continued.*

No. 5.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

1861.

NAME OF CANALS.	TONNAGE.		Total Tonnage.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.
	Vessels.	Merchandise.			Maintenance and Repairs.	Management.	Collections of Tolls, &c.	Tolls refunded or not collected, as per Order in Council of 28th May, 1860		
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz :								Miscellaneous.		
Lachine					10,808 33	11,978 56	9,645 70	235 26		
Beauharnois	1,009,469	886,908	1,896,377	151,061 24	6,482 56	9,294 21	789 09	121,902 11	196,924 07	....
Cornwall					3,524 47	8,874 71	630 69			
Williamsburgh					5,771 71	5,861 67	1,125 00			
Welland	1,327,672	1,020,483	2,348,155	241,768 38	16,931 11	36,611 28	6,610 36	55,326 30 Miscellan. 3,196 60	118,675 65	123,092 73
Burlington Bay	294,244	178,674	472,918	32,799 42	....	....	400 00	32,799 42	33,199 42	....
Ste. Anne Lock	219,675	199,097	418,772	6,195 89	1,180 17	507 70	637 71	6,183 89	3,509 47	....
Ottawa and Rideau Canals, viz :										
Carillon					....	....	....	....		
Chute à Blondeau					3,339 88	3,955 80	....	....		
Grenville	334,157	213,491	547,648	17,748 29	....	....	....	17,651 55	46,265 39	....
Rideau					4,160 90	10,503 20	....	Miscellaneous. 654 06		
St. Ours Lock	122,694	116,239	238,933	10,539 31	1,734 94	1,219 20	422 76	....	17,487 42	... ...
Chambly Canal					6,351 42	6,124 82	1,634 28	....		
Totals	3,307,911	2,614,892	5,922,803	460,112 53	60,285 49	100,931 15	21,895 59	237,949 19	421,061 42	123,092 73

Deduct excess of expenses over	collections at	St. Lawrence Canals	$45,862 83	
do	do	Burlington Bay Canal	400 00	
do	do	Ste. Anne Lock	2,313 58	
do	do	Ottawa and Rideau Canals	28,517 10	
do	do	St. Ours Lock and Chambly Canal	6,948 11	
				84,041 62
		Net Revenue for 1861	$	39,051 11

APPENDIX No. 64.—*Continued.*

No. 6.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1862.									
	TONNAGE.				DEDUCT.					
	Vessels.	Merchandise.	Total Tonnage.	Gross Revenue.	Maintenance and Repairs.	Management.	Collections of Tolls, &c.	Tolls refunded or not collected, as per Order in Council of 28th May, 1860	Total Deductions.	Net Revenue.
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz:								Miscellaneous.		
Lachine					10,250 47	12,022 47	9,417 11	720 79		
Beauharnois					6,366 96	9,470 79	783 96	32 66		
Cornwall	1,049,230	964,394	2,013,624	160,490 95	3,292 88	9,381 80	629 55	138,189 83	213,261 24	140,617 82
								Miscellaneous.		
Williamsburgh					5,724 00	5,798 97	1,125 00	54 00		
Welland	1,476,842	1,243,774	2,720,616	291,794 98	22,120 73	39,129 49	6,515 21	83,411 73	151,177 16	......
Burlington Bay	286,718	191,777	478,495	37,450 03	......	......	500 00	37,450 03	37,950 03	......
Ste. Anne Lock	241,729	228,096	469,825	6,939 23	1,758 29	459 98	645 61	6,939 23	9,803 11	......
Ottawa and Rideau Canals, viz:										
Carillon					......	......	......	......		
Chute à Blondeau					3,761 72	3,663 96	......	......		
Grenville	373,325	337,380	710,705	17,850 63	......	......	......	17,824 73	50,378 87	......
								Miscellaneous.		
Rideau					8,615 62	16,501 86	......	10 98		
St. Ours Lock	154,552	148,301	302,853	13,081 06	1,203 57	1,142 12	407 10	......	20,675 78	......
Chambly Canal					10,400 62	5,893 83	1,628 54	......		
Totals	3,113,722	3,582,396	6,696,118	527,606 88	73,494 86	103,465 27	21,652 08	284,633 98	483,246 19	140,617 82

Deduct excess of expenses over revenue at St. Lawrence Canals	$ 52,770 29	
do do Burlington Bay	500 00	
do do Ste. Anne Lock	2,863 88	
do do Ottawa and Rideau Canals	32,528 24	
do do St. Ours Lock and Chambly Canal	7,593 72	
		96,256 13
Net Revenue for 1862	$	44,360 69

APPENDIX No. 64.—*Continued.*

No. 7.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1863.									
	TONNAGE.		Total Tonnage.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.
	Vessels.	Merchandise.			Maintenance and Repairs.	Management.	Collections of Tolls, &c	Miscellaneous.		
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz :										
Lachine	1,036,309	895,133	1,931,442	116,405 84	8,124 19	11,145 14	8,793 46	1,729 91	69,361 94	47,043 90
Beauharnois					6,113 33	8,797 81	792 11	59 50		
Cornwall					2,089 74	10,082 84	644 35	....		
Williamsburgh					3,818 44	6,046 12	1,125 00	....		
Welland	1,330,097	1,141,120	2,471,217	239,644 69	15,392 02	37,269 18	6,593 04	3,586 80	62,841 04	176,803 65
Burlington Bay	240,445	162,305	402,750	17,645 30	....	....	405 00	....	405 00	17,240 30
St. Anne Lock	318,273	240,370	558,643	5,013 64	84 89	458 45	653 46	....	1,196 80	3,816 84
Ottawa and Rideau Canals, viz :										
Carillon	376,161	360,028	736,189	17,081 87	....	....	....	....	32,546 31	....
Chute à Blondeau					5,265 70	3,775 08	....	....		
Grenville					....	....	....	....		
Rideau					6,239 57	16.838 73	....	427 23		
St. Ours Lock	272,628	253,319	525,947	25,408 98	2,101 87	1,058 81	404 23	58 72	19,703 78	5,705 20
Chambly Canal					8,136 70	6.22	1,627 03	293 92		
Totals	3,573,913	3,052,275	6,626,188	421,200 32	57,366 45	101,494 66	21,037 68	6,156 08	186,054 87	250,609 89
Deduct excess of expenses over Revenue at Ottawa and Rideau Canals										15,464 44
Net Revenue for 1863 $										235,145 45

APPENDIX No. 64.—*Continued.*

No. 8.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1864.									
	TONNAGE.				DEDUCT.					
	Vessels.	Merchandise.	Total Tonnage.	Gross Revenue.	Maintenance and Repairs.	Management.	Collections of Tolls, &c.	Miscellaneous.	Total Deductions.	Net Revenue.
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz:										
Lachine	291,513	200,162	491,675	28,967 54	5,250 56	3,819 41	4,561 08	193 41	28,614 76	352 78
Beauharnois					2,572 14	3,138 76	395 26	....		
Cornwall					1,395 23	3,168 83	315 75	....		
Williamsburgh					1,179 64	2,062 19	562 50	....		
Welland	446,106	322,343	768,449	65,654 46	6,564 57	16,074 94	2,996 06	....	25,635 57	40,018 89
Burlington Bay	99,309	59,524	158,833	4,868 20	547 96	....	200 00	....	747 96	4,120 24
Ste. Anne Lock	79,463	47,410	126,873	1,089 68	....	100 17	321 34	....	421 51	668 17
Ottawa and Rideau Canals, viz:										
Carillon	123,653	116,881	240,534	5,067 81	....	....	....	....	17,066 44	....
Chute à Blondeau					3,551 16	1,469 02	....	282 10		
Grenville					....	....	....	....		
Rideau					4,457 48	6,950 01	11 40	345 27		
St. Ours Lock	76,506	66,176	142,682	7,077 55	181 13	491 86	200 00	....	8,994 50	....
Chambly Canal					4,253 07	3,055 17	813 27	....		
Totals	1,116,550	812,496	1,929,046	112,725 24	29,952 94	40,330 36	10,376 66	820 78	81,480 74	45,160 08

Deduct excess of expenses over collections at Ottawa and Rideau Canals	$11,998 63	
do do Chambly Canal and St. Ours Lock	1,916 95	
		13,915 95
Net Revenue for the half year ended the 1st July, 1864		31,244 50

APPENDIX No. 64.—*Continued.*

No. 9.—Statement showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1865.									
	Tonnage.				Deduct.					
	Vessels.	Merchandise.	Total Tonnage.	Gross Revenue.	Maintenance and Repairs.	Management.	Collection of Tolls, &c.	Tolls Refunded.	Total Deductions.	Net Revenue.
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz :										
Lachine	994,564	683,116	1,677,680	82,373 23	9,690 50	12,333 80	9,380 85		71,245 51	11,127 72
Beauharnois					5,177 00	9,520 90	788 09			
Cornwall					2,612 52	9,929 68	644 16			
Williamsburgh					4,185 86	5,780 54	1,201 61			
Welland	1,135,806	868,078	2,003,884	178,053 63	19,410 17	41,446 89	6,441 91	1,723 06	69,052 03	109,001 60
Burlington Bay	241,818	121,976	363,794	12,082 05			400 00		400 00	11,682 05
Ste. Anne Lock	337,382	239,530	576,912	5,248 71	1,197 13	533 43	654 29		2,384 85	2,863 86
Ottawa and Rideau Canals, viz :										
Carillon	442,950	323,141	766,091	16,495 22					32,069 20	
Chute à Blondeau						4,263 12				
Grenville										
Rideau					9,916 95	17,889 13				
St. Ours Lock	268,315	216,554	484,869	24,134 80	827 52	1,275 23	405 17		17,315 49	6,819 31
Chambly Canal					7,125 08	6,042 89	1,639 60			
Totals	3,420,835	2,452,395	5,873,230	318,387 64	60,172 73	109,015 61	21,555 68	1,723 06	192,467 08	141,494 54
Deduct excess of expenses over collections at Ottawa and Rideau Canals										15,573 98
Net Revenue for 1865 $										125,920 56

APPENDIX No. 64.—*Continued.*

No. 10.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1866.									
	TONNAGE.		Total Tonnage.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.
	Vessels.	Merchandise.			Maintenance and Repairs.	Management.	Collections of tolls, &c.	Miscellaneous.		
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz:										
Lachine	1,047,494	753,114	1,800,608	81,786 20	9,123 80	11,589 65	9,795 72	6,321 44	75,999 36	5,786 84
Beauharnois					5,211 69	9,456 45	787 99			
Cornwall					2,727 83	10,191 15	642 22			
Williamsburgh					3,233 66	5,792 76	1,125 00			
Welland	1,077,314	980,218	2,057,532	190,525 14	22,137 70	39,029 73	6,286 10	....	67,453 53	123,071 61
Burlington Bay	232,774	135,936	368,710	14,922 62	283 06	....	725 00	....	1,008 06	13,914 56
Ste. Anne Lock	377,185	282,501	659,686	6,030 29	332 29	518 67	648 71	....	1,499 67	4,530 62
Ottawa and Rideau Canals, viz:										
Carillon	493,992	397,036	891,028	13,597 24	....	....	....	....	33,965 61	....
Chute à Blondeau					1,394 92	4,288 58	59 35	....		
Grenville					....	....	....	....		
Rideau					9,551 74	18,312 59	358 43	....		
St. Ours Lock	363,170	320,467	683,637	28,525 77	901 26	1,232 54	402 32	....	17,720 21	10,805 56
Chambly Canal					6,527 13	6,865 15	1,791 81	....		
Totals	3,591,929	2,869,272	6,461,201	335,387 26	61,425 08	107,277 27	22,622 65	6,321 44	197,646 44	158,109 19
Deduct excess of expenses over collections at Ottawa and Rideau Canals										20,368 37
Net Revenue for 1866 $										137,740 82

APPENDIX No. 64.—*Concluded.*

No. 11.—STATEMENT showing the Total Tonnage of Vessels and Merchandise which passed through the Provincial Canals, &c.

NAME OF CANALS.	1867.									
	TONNAGE.		Total Tonnage.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.
	Vessels.	Merchandise.			Maintenance and Repairs.	Management	Collections of Tolls, &c	Tolls Refunded.		
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
St. Lawrence Canals, viz:										
Lachine	1,122,916	906,299	2,029,215	92,100 68	12,437 48	12,520 72	10,202 05	Miscell'eous 15 46	76,282 06	15,818 62
Beauharnois					7,090 44	9,490 09	781 79			
Cornwall					3,493 96	10,234 88	644 95			
Williamsburgh					2,610 95	5,634 29	1,125 00			
Welland	993,938	933,260	1,927,198	182,512 10	26,357 65	36,650 21	6,317 23	1,204 16	70,529 25	111,982 85
Burlington Bay	282,718	172,384	455,102	18,904 54	....	....	500 00	....	500 00	18,404 54
Ste. Anne Lock	450,942	343,139	794,081	7,413 56	733 38	510 71	649 23	....	1,893 32	5,520 24
Ottawa and Rideau Canals, viz;										
Carrillon	574,614	470,242	1,044,856	16,618 88	....	....	....	....	49,209 27	
Chute à Blondeau					12,394 37	5,164 38	76 38	....		
Grenville					....	....	....	....		
Rideau					12,654 56	18,516 11	403 52	....		
St. Ours Lock	418,644	410,430	829,074	35,592 48	1,566 47	1,242 17	407 95	....	21,347 34	14,245 14
Chambly Canal					8,522 78	7,768 53	1,839 44	....		
Totals	3,843,772	3,235,754	7,079,526	353,142 24	87,862 04	107,732 09	22,947 49	1,219 62	219,761 24	165,971 39
Deduct excess of expenses over revenue at Ottawa and Rideau Canals									$32,590 39	32,590 39
Net Revenue for 1867									$	133,381 00

GENERAL REMARKS.

The tonnage of Vessels and Merchandise, and the revenue collected on the Provincial Canals, for each year, from 1857 to 1867 inclusive, shown in the preceding Statements, are taken from the "*Trade and Navigation Returns;*" and the cost of Maintenance, Management, Collection of tolls, &c., from the "*Public Accounts.*" The Net Revenue in some cases differs slightly from that shown in the Public Accounts.

OCT. DIONNE.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 1st July, 1867.

APPENDIX No. 65.

STATEMENT showing the Number of Passengers conveyed through the Provincial Canals, during the undermentioned years.

NAME OF CANALS.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.*	1865.	1866.	1867.	Total Number from 1857 to 1867, inclusive.
St. Lawrence..................	31,962	20,962	24,850	23,896	35,359	28,214	26,673	6,924	22,663	27,264	35,148	283,915
Welland	17,232	10,599	12,332	11,130	3,091	5,087	7,769	2,518	7,263	9,387	7,173	93,581
Burlington Bay..............	....	....	....	....	....	....	6,178	1,259	6,276	11,741	9,951	35,405
Ste. Anne Lock..............	11,614	11,232	13,777	14,334	16,051	17,365	20,916	4,712	21,824	22,184	20,796	174,805
Ottawa and Rideau..........	....	....	3,618	3,185	2,861	1,018	1,288	288	1,983	1,905	2,325	18,471
Chambly, and St. Ours Lock..	2,423	2,299	4,037	2,316	1,538	1,533	1,867	634	1,937	2,114	1,747	22,445
Totals..........	63,231	45,092	58,614	54,861	58,900	53,217	64,691	16,335	61,946	74,595	77,140	628,622

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* 6 Months, viz : from 1st January to 1st July.—Yearly average, 57,148.

APPENDIX

STATEMENT showing the Number of Vessels of all kinds which passed through the
from the

Years.	CANADIAN.													
	Sailing and other Vessels.							Steam Vessels.						
	Under 50 Tons.	50 Tons and under 100.	100 Tons and under 150.	150 Tons and under 200.	200 Tons and under 250.	250 to 400 Tons.	Total number.	Under 50 Tons.	50 Tons and under 100.	100 Tons and under 150.	150 Tons and under 200.	200 Tons and under 250.	250 to 400 Tons.	Total number.
1857	195	359	197	94	51	75	971	24	34	20	14	10	7	109
1858	125	319	180	76	38	66	804	31	29	14	6	5	6	91
1859	127	264	150	50	28	44	663	29	31	10	10	6	2	88
1860	173	277	158	57	31	56	752	22	36	16	11	10	3	98
1861	133	291	218	74	33	77	826	27	41	16	16	18	2	120
1862	177	285	161	58	40	60	781	28	40	28	13	9	7	125
1863	148	270	164	59	42	87	770	34	41	18	11	10	9	123
1864	135	242	170	67	37	73	724	23	19	8	11	14	11	86
1865	152	271	159	54	46	87	769	23	19	14	12	11	12	91
1866	174	281	212	54	35	94	850	50	35	14	11	5	8	123
1867	162	299	198	61	49	104	873	66	39	17	9	11	8	150
Totals	1,701	3,158	1,967	704	430	823	8,783	357	364	175	124	109	75	1,204

No. 66.

Provincial Canals, during the undermentioned years, distinguishing the Canadian American Vessels.

AMERICAN.

Sailing and other Vessels.							Steam Vessels.							Total number of Canadian and American Vessels of all kinds.
Under 50 Tons.	50 Tons and under 100.	100 Tons and under 150.	150 Tons and under 200.	200 Tons and under 250.	250 to 400 Tons.	Total number.	Under 50 Tons.	50 Tons and under 100.	100 Tons and under 150.	150 Tons and under 200.	200 Tons and under 250.	250 to 400 Tons.	Total number.	
68	69	33	43	54	219	486	3	4	2	3	1	16	29	1,595
120	101	33	47	54	229	584	10	7	5	....	2	14	38	1,517
95	118	28	38	38	216	533	5	5	4	1	1	19	35	1,319
112	113	32	40	40	214	551	12	4	4	1	1	19	41	1,442
83	143	52	46	58	232	614	11	5	3	2	1	21	43	1,603
105	150	54	51	60	226	646	12	7	4	3	1	20	47	1,599
93	134	50	51	55	248	631	24	5	1	2	2	21	55	1,579
22	96	32	34	33	176	393	7	3	1	1	1	24	37	1,240
56	99	35	40	33	193	456	15	6	2	3	3	31	60	1,376
54	136	29	37	67	134	457	12	14	3	3	3	26	61	1,491
35	128	25	34	57	138	417	9	10	2	3	1	28	53	1,493
843	1,287	403	461	549	2,225	5,768	120	70	31	22	17	239	499	16,254

Yearly average.	Canadian Vessels......	908
	American do	570
	Total yearly average	1,478

APPENDIX No. 67.

ABSTRACT showing the Number of Vessels and Passengers,—the Gross Tonnage of Vessels and Merchandise which passed through the Provincial Canals—the Gross and Net Revenue collected thereon—derived from all sources—with the deductions specified, for each year, from 1857 to 1867, inclusive.

NUMBER OF VESSELS OF ALL KINDS.

		1857.	1858.	1859.	1860.	1861.	1862.	1863.	* 1864.	1865.	1866.	1867.
Canadian.	Sailing Vessels.	971	804	663	752	826	781	770	724	769	850	873
	Steam do	109	91	88	98	120	125	123	86	91	123	150
American	Sailing Vessels.	486	584	533	551	614	646	631	393	456	457	417
	Steam do	29	38	35	41	43	47	55	37	60	61	53
Totals		1,595	1,517	1,319	1,442	1,603	1,599	1,579	1,240	1,376	1,491	1,493

NUMBER OF PASSENGERS.

1857.	1858.	1859.	1860.	1861.	1862.	1863.	* 1864.	1865.	1866.	1867.
63,231	45,092	58,614	54,861	58,900	53,217	64,691	16,335	61,946	74,595	77,140

TONNAGE.

	1857.	1858.	1859.	1860.	1861.	1862.	1863.	* 1864.	1865.	1866.	1867.
Tonnage of Vessels	2,315,895	2,712,366	2,455,021	3,031,100	3,307,911	3,113,722	3,573,913	1,116,550	3,420,835	3,591,929	3,843,772
do Merchandise	1,847,007	2,025,254	2,167,795	2,583,701	2,614,892	3,582,396	3,052,275	812,496	2,452,395	2,869,272	3,235,754
Totals	4,162,902	4,737,620	4,622,816	5,614,801	5,922,803	6,696,118	6,626,188	1,929,046	5,873,230	6,461,201	7,079,526

GROSS REVENUE.

	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
From Tolls......................	341,279 53	302,698 17	222,603 33	†316,550 23	†419,385 02	†497,302 96	385,220 21	102,078 75	282,757 17	304,352 21	319,643 70
do Rents, storage, &c.....	13,822 22	63,750 78	36,926 85	21,630 98	40,727 51	30,303 92	35,930 11	10,646 49	35,630 47	31,035 05	33,498 54
Totals.............$	355,101 75	366,448 95	259,530 18	338,181 21	460,112 53	527,606 88	421,200 32	*112,725 24	318,387 64	335,387 26	353,142 24

DEDUCTIONS FROM REVENUE.

	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
For repairs....................	127,242 06	110,077 23	78,919 86	80,168 78	60,285 49	73,494 86	57,366 45	29,952 94	60,172 73	61,425 08	87,862 04
do management...............	82,710 00	105,281 28	106,308 67	106,253 33	100,931 15	103,465 27	101,494 66	40,330 36	109,015 61	107,277 27	107,732 09
do collections of tolls, &c..	23,537 50	24,658 39	25,055 94	21,925 29	21,895 59	21,652 08	21,037 68	10,376 66	21,555 68	22,622 65	22,947 49
do tolls refunded and miscellaneous	2,545 18	4,578 38	141 28	110,847 91	237,949 19	284,633 98	6,156 08	820 78	1,723 06	6,321 44	1,219 62
Total deductions..$	236,034 74	244,595 28	210,425 75	319,195 31	421,061 42	483,246 19	186,054 87	*81,480 74	192,467 08	197,646 44	219,761 24

NET REVENUE.

	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
	119,067 01	121,853 67	49,104 43	18,935 90	39,051 11	44,360 69	235,145 45	*31,244 50	125,920 56	137,740 82	133,381 00

* For six months, viz: from 1st January to 1st July. The Fiscal Year afterwards ends on the 30th of June of each succeeding year.

† For tolls not collected or refunded during the years 1860-61-62, as per Order in Council of 28th May 1860.—See Appendix No. 63, Statements Nos. 4, 5, 6, at pages 455 and 456.

Department of Public Works,
Ottawa, 1st July, 1867.

Oct. DIONNE.

APPENDIX No. 68.

STATEMENT No. 1.—Showing the Gross Revenue, the Expenditure for Repairs, Management, Collection of Tolls, &c., and the Net Revenue on the Provincial Slides, from the date of their opening to the 30th June 1867.

SAGUENAY SLIDES.

Years.	Gross Revenue.	DEDUCT. Repairs.	DEDUCT. Manage-ment.	DEDUCT. Collection of Tolls.	DEDUCT. Miscella-neous.	Total. Deductions.	Net yearly Revenue.	Deficit.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1860...	1,505 10	....	545 96	....	....	545 96	959 14	....
1861...	....	289 89	664 04	....	....	953 93	....	953 93
1862...	3,572 29	....	725 25	....	....	725 25	2,847 04	....
1863...	1,830 88	....	688 40	....	....	688 40	1,142 48	....
1864*..	....	....	278 62	....	....	278 62	....	278 62
1865...	....	....	721 45	....	....	721 45	....	721 45
1866...	....	460 15	716 36	....	....	1,176 51	....	1,176 51
1867...	1,381 10	637 00	684 05	....	....	1,321 05	60 05	....
	8,289 37	1,387 04	5,024 13	....	....	6,411 17	5,008 71	3,130 51
Deficit..							3,130 51	
Total Net Revenue up to 30th of June 1867.........................$							1,878 20	

STATEMENT No. 2.—Showing the Gross Revenue, the Expenditure for Repairs, &c.

ST. MAURICE SLIDES.

Years.	Gross Revenue.	DEDUCT. Repairs.	DEDUCT. Manage-ment.	DEDUCT. Collection of Tolls.	DEDUCT. Miscella-neous.	Total Deductions.	Net Revenue.	Deficit.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1855...	4,285 63	379 62	7,291 20	....	....	7,670 82	....	3,385 19
1856...	....	598 82	5,865 51	....	....	6,464 33	....	6,464 33
1857...	5,011 66	600 00	7,940 25	....	....	8,540 25	....	3,528 59
1858...	2,394 84	600 00	7,729 36	....	....	8,329 36	....	5,934 52
1859...	2,528 97	543 21	6,669 98	....	....	7,213 19	....	4,684 22
1860...	2,911 73	837 91	7,322 53	....	....	8,160 44	....	5,248 71
1861...	2,020 88	850 44	6,737 38	300 00	....	7,887 82	....	5,866 99
1862...	2,886 33	5,641 36	7,321 06	....	....	12,962 42	....	10,076 09
1863...	4,491 42	1,317 18	7,082 72	....	....	8,399 90	....	3,908 48
1864*..	15 64	68 59	3,762 24	....	....	3,830 83	....	3,815 19
1865...	2,266 72	4,857 30	7,271 01	....	....	12,128 31	....	9,861 59
1866...	7,400 79	4,705 47	7,963 70	....	....	12,669 17	....	5,268 38
1867...	7,009 46	5,560 38	8,785 20	....	....	14,345 58	....	7,336 12
	43,224 02	26,560 28	91,742 14	300 00	....	118,602 42	....	75,378 40
Deduct Gross Revenue...............................						43,224 02		
Total Deficit up to 30th of June 1867.................$						75,378 40		

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* For 6 months from 1st January to 30th June, 1864; after the 30th of June, 1864, the end of the Fiscal Year is on the 30th of June, of each succeeding year.

APPENDIX No. 68.—*Continued*

STATEMENT No. 3.—Showing the Gross Revenue, the Expenditure for Repairs, &c.

OTTAWA RIVER SLIDES.

Years.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.	Deficit.
		Repairs.	Management.	Collection of Tolls.	Miscellaneous.			
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
1845....	3,784 28	....	640 00	....	....	640 00	3,144 28	....
1846....	24,218 62	....	2,517 23	....	....	2,517 23	21,701 39	....
1847....	14,332 85	2,416 02	3,517 48	....	....	5,933 50	8,399 35	....
1848....	18,647 80	11,855 85	3,069 03	....	....	14,924 88	3,722 92	....
1849....	† 32,513 46	3,591 55	3,225 18	1,067 68	....	7,884 41	24,629 05	....
1850....	22,822 02	4,372 45	3,839 38	1,072 54	....	9,284 37	13,537 65	....
1851....	27,461 62	1,024 15	3,632 84	1,081 46	....	5,738 45	21,723 17	....
1852....	38,727 86	4,478 54	4,619 52	1,107 34	....	10,205 40	28,522 46	....
1853....	29,819 88	957 35	5,217 49	1,112 39	....	7,287 23	22,532 65	....
1854....	38,054 46	2,086 18	5,790 85	1,102 00	....	8,979 03	29,075 43	....
1855....	21,850 20	2,571 97	8,483 50	....	....	11,055 47	10,794 73	....
1856....	30,865 67	349 10	8,179 25	1,895 88	....	10,424 23	20,441 44	....
1857....	31,326 22	3,298 55	10,166 88	1,000 00	....	14,465 43	16,860 79	....
1858....	34,530 16	3,989 53	8,653 73	1,000 00	....	13,643 26	20,886 90	....
1859....	33,158 08	3,851 23	9,688 35	1,000 00	....	14,539 58	18,618 50	....
1860....	45,760 03	4,335 85	9,467 31	1,214 83	....	15,017 99	30,742 04	....
1861....	42,730 89	8,481 48	10,677 19	2,200 00	....	21,358 67	21,372 22	....
1862....	44,288 64	4,765 55	10,895 89	1,000 00	*748 70	17,410 14	26,878 50	....
1863....	66,371 75	2,189 69	11,381 34	1,000 00	....	14,571 03	51,800 72	....
1864 ‡..	4,160 54	3,783 74	5,029 64	667 00	....	9,480 38	....	5,319 84
1865....	57,212 63	12,063 44	7,812 92	....	....	19,876 36	37,336 27	....
1866....	54,345 48	6,708 15	10,901 87	....	....	17,610 02	36,735 46	....
1867....	47,239 43	9,850 70	13,121 43	....	....	22,972 13	24,267 30	....
	764,222 57	97,021 07	160,528 30	17,521 12	748 70	275,819 19	493,723 22	5,319 84
						Deduct deficit..........	5,319 84	
						Total Net Revenue up to 30th June 1867..........$	488,403 38	

* Tolls refunded..........	$ 742 43
Sundries..........	6 27
	748 70

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† In this amount is included $11,143 45 of bonds received for dues for previous years.

‡ For 6 months from 1st January to 30th June, 1864; after the 30th of June, 1864, the end of the Fiscal Year is on the 30th of June of each succeeding year.

APPENDIX No. 68.—*Concluded.*

STATEMENT No. 4—Showing the Gross Revenue, Expenditure for Repairs, &c. RIVER TRENT SLIDES.

Years.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.	Deficit.
		Repairs.	Management.	Collection of Tolls.	Miscellaneous.			
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts	$ cts.
1845....	24 00	....	....	518 33	....	518 33	....	494 33
1846....	7,007 86	....	2,334 60	600 00	....	2,934 60	4,073 26	....
1847....	4,651 60	....	2,108 46	600 00	....	2,708 46	1,943 14	....
1848....	3,054 00	....	809 08	600 00	....	1,409 08	1,644 92	....
1849....	4,687 25	361 51	2,658 35	600 00	....	3,619 86	1,067 39	....
1850....	5,283 80	1,796 65	1,592 00	600 00	....	3,988 65	1,295 15	....
1851....	3,735 83	1,599 06	1,197 92	607 90	....	3,404 88	330 95	....
1852....	5,732 45	6,225 04	1,353 85	600 00	....	8,178 89	....	2,446 44
1853....	4,721 20	8,728 98	1,534 00	600 00	....	10,862 98	....	6,141 78
1854....	5,495 40	2,764 17	1,365 17	600 00	....	4,729 34	766 06	....
1855....	* 20 00	....	1,141 47	300 00	....	1,441 47	....	1,421 47
1856....	40 00	485 37	451 13	....	....	936 50	....	896 50
1857....	40 00	598 79	320 00	....	....	918 79	....	878 79
1858....	40 00	516 76	414 22	....	....	930 98	....	890 98
1859....	40 00	200 00	200 00	....	....	400 00	....	360 00
1860....	40 00	....	200 00	....	....	200 00	....	160 00
1861....	40 00	....	200 00	....	....	200 00	....	160 00
1862....	50 00	....	200 00	....	....	200 00	....	150 00
1863....	40 00	....	200 00	....	....	200 00	....	160 00
1864 †..	....	....	100 00	....	....	100 00	....	100 00
1865....	40 00	594 86	200 00	....	....	794 86	....	754 86
1866....	....	....	....	....	....	....	....	....
1867....	....	....	....	....	....	....	....	....
	44,783 39	23,871 19	18,580 25	6.226 23		48,677 67	11,120 87	15,015 15
Total Deficit, up to 30th June, 1867..................						3,894 28		

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* In 1855 the Trent works were tranferred to a Company on certain conditions: See GENERAL REMARKS, Appendix 15, page 128.

† For 6 months from 1st of January to 30th of June, 1864, and afterwards to 30th of June each succeeding year.

For Statement showing the Cost of Management, Repairs, Gross Receipts, and Net Revenue on these Slides since they were transferred to the Company.—See Appendix No. 15, page 130.

APPENDIX No. 68—*Continued.*

ABSTRACT from Statements Nos. 1, 2, 3, 4 showing the Gross Revenue, the Expenditure for Repairs, Management, Collection of Tolls, &c., and the Net Revenue on the Provincial Slides, from the date of their opening to the 30th June, 1867.

Names of Slides.	Gross Revenue.	DEDUCT.				Total Deductions.	Net Revenue.	Deficit.
		Repairs.	Management.	Collection of Tolls.	Miscellaneous.			
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Saguenay, 1860 to 1867.	8,289 37	1,387 04	5,024 13	....	....	6,411 17	1,878 20	....
St. Maurice, 1855 to 1867.	43,224 02	26,560 28	91,742 14	300 00	....	118,602 42	....	75,378 40
Ottawa, 1843 to 1867.	764222 57	97,021 07	160,528 30	17,521 12	748 70	275,819 19	488,403 38	....
Trent River, 1845 to 1866.	44,783 39	23,871 19	18,580 25	6,226 23	....	48,677 67	....	3,894 28
Totals......	860,519 35	148,839 58	275,874 82	24,047 35	748 70	449,510 45	490,281 58	79,272 68
Deduct deficit..................							79,272 68	
Total Net Revenue on the Provincial Slides, from the date of their opening to the 30th of June, 1867..................							411,008 90	

N. B.—The preceding statements Nos. 1, 2, 3, 4, have been compiled from the "*Public Accounts.*"

APPENDIX No. 69.

STATEMENT of the Revenue arising from Public Works and Receipts on account of Interest on Sales thereof, in the Province of Canada, between 1st July, 1866, and 30th June, 1867.

WORKS.		Gross Revenue.	DEDUCTIONS.			Total Deductions.	Net Revenue.
			Salaries and expenses of Collection.	Tolls refunded.	Expenses for maintenance and repairs.		
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
CANALS	Welland	181,321 16	6,317 23	81 26	63,007 86	69,406 35	111,914 81
	St. Lawrence	92,347 46	12,753 79		63,528 27	76,282 06	16,065 40
	Burlington Bay	18,904 54	500 00			500 00	18,404 54
	Chambly	35,260 10	1,839 44		16,291 31	18,130 75	17,129 35
	Ottawa and Rideau	7,538 38	403 52	262 95	31,170 67	31,837 14	
	Carillon and Grenville	9,669 28	76 33		17,558 75	17,635 08	
LOCKS	Ste. Anne	7,413 46	649 23		1,244 09	1,893 32	5,520 14
	St. Ours	346 72	407 95		2,808 64	3,216 59	
HARBOURS	Colborne	1,562 63					1,562 63
	Dalhousie	1,537 41					1,537 41
	Dover	2,303 60			5 29	5 29	2,298 31
	Whitby	930 00					930 00
SLIDES	Ottawa	47,239 43			22,972 13	22,972 13	24,267 30
	St. Maurice	7,009 46			14,345 58	14,345 58	
	Saguenay	1,381 10			1,321 05	1,321 05	60 05
ROADS	Dundas and Waterloo	3,000 00					3,000 00
	Hamilton and Port Dover	1,792 83			89 30	89 30	1,703 53
	Kingston and Napanee	2,460 00					2,460 00
	Whitby and Scugog	1,110 00					1,110 00
	York and Peel	4,039 44					4,039 44
BRIDGES	Dunville	879 00					879 00
	Union Suspension	2,767 19	305 50			305 50	2,461 69
NEWCASTLE DISTRICT WORKS	River Trent Works	40 00			4,444 59	4,444 59	
	Bobcaygean, Lindsay, Scugog and Buckhorn Works				389 67	389 67	
BONNER PROPERTY		239 23					239 23
	Carried over	431,092 42	23,252 99	244 21	239,177 20	262,774 40	215,582 83

APPENDIX No. 69.—*Concluded.*

STATEMENT of the Revenue arising from Public Works and Receipts on account of Interest on Sales thereof, &c.

WORKS.		Gross Revenue.	DEDUCTIONS.			Total Deductions.	Net Revenue.
			Salaries and expenses of Collection.	Tolls refunded.	Expenses for maintenance and Repairs.		
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Brought forward..		431,092 42	23,252 99	344 21	239,177 20	262,774 40	215,582 83
Deduct Excess of expenditure over Collection at							
Ottawa and Rideau Canals	$24,298 76						
Carillon and Grenville do	7,965 80						
St. Our's Lock..	2,869 87						
St. Maurice Slides..	7,336 12						
River Trent Works..	4,404 59						
Bobcaygean, Lindsay, Scugog and Buckhorn Works	389 67	....	....	....	....	....	47,264 81
							168,318 02
Payments by Warrants for miscellaneous charges against various Publics Works. *Vide* Statement No. 12, in "*Public Accounts*" of this year..........................		....	....	....	....	4,725 83	4,725 83
							163,592 19
LESS—Balances outstanding, 30th June 1867..................................	33,256 94						
OFF do 30th June 1866..................................	10,331 44	22,925 50	....	....	....	....	22,925 50
		408,166 92	....	....	....	267,500 23	140,666 69

WM. DICKINSON,
Deputy Inspector General.

DEPARTMENT OF THE MINISTER OF FINANCE,
Ottawa, 1st July 1867.

APPENDIX No. 70.

STATEMENT SHOWING:

1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841);

2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867);

3rd. The Expenditure from other than Government Funds.

APPENDIX No. 70.

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Canal, &c., in miles.	Number of Locks.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
ST. LAWRENCE NAVIGATION.							
LOWER AND UPPER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
LACHINE CANAL—Under Commissioners before the Union and under the Department of Public Works since..................	A 398,404 15	B 2,149,128 70	2,547,532 85	....	2,587,532 85	8.50	5
Sum advanced by Imperial Government and spent before Union...	....	....	....	40,000 00			
BEAUHARNOIS CANAL	....	C 1,611,424 11	1,611,424 11	....	1,611,424 11	11.25	9
CORNWALL CANAL—Under Commissioners before the Union and under the Department of Public Works since..................	D 1,448,538 37	E 467,301 70	1,933,152 69	....	1,933,152 69	11.50	7
Under Commissioners in Settlement of Claims for land, &c...	....	17,312 62					
WILLIAMSBURGH CANALS—Or the Farran's Point, Rapide Plat, Iroquois, Junction and Galops Canals................................	....	F 1,320,655 54	1,320,655 54	....	1,320,655 54	12.38	6
General Expenditure on St. Lawrence Canals (Lachine, Beauharnois, Cornwall and Williamsburgh) not apportioned......	....	G 116,821 31	116,821 31	....	116,821 31	....	....
H	1,846,942 52	5,682,643 98	7,529,586 50	40,000 00	7,569,586 50	43.63	27
WELLAND CANAL;—Stock originally held by private parties and assumed by Government under Act of 1839................................$ 471,200 00 Old Stock held by Province of Upper Canada... 430,000 00 Loans made by Province of Upper Canada and converted into Stock in 1837........................ 408,000 00 New Stock, Province of Upper Canada, of which was advanced and spent, up to the end of 1837 264,576 00 Stock held by Province of Lower Canada......... 100,000 00 $1,673,776 00	I 1,851,427 77	J On Old Works, 616,666 61 K On New Works, and	7,416,019 83	....	7,638,239 83	Main 27.20 Grand Feeder, 21.00	Trunk, 27 River 2

Additional Expenditure, prior to the Union, according to Appendix No. 29, at page 330, from Finance Department........ 177,651 77 $1,851,427 77		Enlargement of Canal, 4,947,925 45				Port Branch, 1.75	Maitland 1
Sum advanced by the Imperial Government and spent before the Union	....	....	....	222,220 00			
Burlington Bay Canal—Under Commissioners before the Union and under the Department of Public Works since........ Additional Expenditure under Finance Department........	L 124,356 08	M 291,044 49 17,283 83	N432,684 40	....	432,684 40	0.50	None.
Lake Ste. Claire Flats—Dredging of Channel........	....	O 19,984 45	19,984 45	P 50,500 00	70,484 45	1.00	do
Lake St. Peter—Dredging of Channel........	....	Q 1,164,235 08	1,164,235 08	....	1,164,235 08	11.50	do
Lachine, Coteau and Cedars Rapids—Improvement thereof...	R 48,405 83	....	48,405 83	....	48,405 83	....	
Total, St. Lawrence Navigation (S)........$	3,871,132 20	12,739,783 89	16,610,916 09	312,720 00	16,923,636 09	106.58	57

ABSTRACT.

St. Lawrence Navigation.

Total Lower Canada.

Lachine and Beauharnois Canals, Lake St. Peter, Lachine, Coteau and Cedars Rapids—Including $64,000 for general expenditure	446,809 93	4,988,787 89	5,435,597 87	40,000 00	5,475,597 87	31.25	14
Total Upper Canada.							
Cornwall, Williamsburgh and Welland Canals, and Lake Ste. Claire Flats, including $52,821 31 for general expenditure	3,424,322 22	7,750,996 00	11,175,318 22	272,720 00	11,448,038 22	75.33	43
Total as above........$	3,871,132 20	12,739,783 89	16,610,916 09	312,720 00	16,923,636 09	106.58	57

N.B.—For references A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S,—see "St. Lawrence Navigation," at the end of this Appendix.

The history and description of these works will be found in the Report of the Commissioner of Public Works, for the fiscal year ending 30th June, 1867, and in the Appendices thereto, viz: No. 3, pages 12 to 28;—No. 4, pages 48 to 52;—No. 5, pages 53 to 55;—No. 6, pages 56 to 58.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.		Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Canals, &c., in Miles.	Number of Locks.
		Before the Union, so far as ascertained.	Since the Union, up to the 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
MONTREAL AND KINGSTON NAVIGATION *viâ* OTTAWA.								
LOWER AND UPPER CANADA.		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
Ste. Anne Lock		A 19,860 02	B 114,596 49	134,456 51	....	134,456 51	0.13	1
Carillon Canal		....	....	....	....	....	2.13	3
Chute a Blondeau Canal	Constructed by Imperial Government	....	....	....	C	....		
	Improved under Department of Public Works	....	D 63,053 64	63,053 64	....	63,053 64	0.13	1
Grenville Canal		....	....	....	....	....	5.75	7
Rideau Canal	Constructed by Imperial Government.	....	....	....	E 3,911,701 47	4,064,764 07	126.25	47
	Improved under Department of Public Works	....	F 153,062 60	153,062 60	....			
River Tay	Branch of the Rideau Navigation, Government Loan to Company since 1833	G* 5,630 35	2,133 70	H 7,764 05	I 10,000 00	17,764 05	....	5
Total, Montreal and Kingston Navigation *viâ* Ottawa.. $		25,490 37	332,846 43	358,336 80	3,921,701 47	4,280,038 27	134.39	64
ABSTRACT.								
Montreal and Kingston Navigation *viâ* Ottawa.								
Total in Lower Canada.								
Ste. Anne Lock, Carillon, Chute a Blondeau and Grenville Canals		19,860 02	177,650 13	197,510 15	....	197,510 15	8.14	12
Total in Upper Canada.								
Rideau Canal and River Tay		5,630 35	155,196 30	160,826 65	3,921,701 47	4,082,528 12	126.25	52
Total as above $		25,490 37	332,846 43	358,336 80	3,921,701 47	4,280,038 27	134.39	64

MONTREAL AND LAKE HURON NAVIGATION *viâ* OTTAWA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
Chats Canal (Not completed), Lower Canada....	....	J 482,950 81	482,950 81	....	482,950 81	2.83	6

N.B.—For references A, B, C, D, E, F G*, H, I, J,—see "Montreal and Kingston Navigation *viâ* Ottawa"—also "Montreal and Lake Huron Navigation *viâ* Ottawa," at the end of this Appendix.

The history and description of these works, will be found in the Report of the Commissioner of Public Works, for the fiscal year ending 30th June, 1867, and in the Appendices thereto, viz: No. 3, pages 33 to 38; No. 7, pages 59 to 67.

RICHELIEU AND LAKE CHAMPLAIN NAVIGATION. LOWER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
St. Ours Lock and Dam	....	A 121,537 65	121,537 65	....	121,537 65	0.13	1
Chambly Canal—Under Commissioners on the Works of the Canal, not including payments for interest on money borrowed	B 322,441 58	C 158,375 48	634,711 76	....	634,711 76	12.00	9
Under Department of Public Works, on the Works of the Canal, not including payments of interest on money borrowed.........	....	D 69,758 01					
Under Department of Public Works, for claims against former Commissioners..	....	E 1,830 40					
Through Inspector General, for claims of contractors against former Commissioners	....	F 53,657 97					
Additional through Inspector General	....	28,648 32					
Total, Richelieu and Lake Champlain Navigation, Lower Canada.$	G 322,441 58	H 433,807 83	756,249 41	.. ..	756,249 41	12.13	10

N.B.—For references A, B, C, D, E, F, G, H,—see "Richelieu and Lake Champlain Navigation," at the end of this Appendix.

The history and description of these works, will be found in the Report of the Commissioner of Public Works, for the fiscal year ending 30th June, 1867, and in the Appendix thereto, viz.: No. 3, pages 28 to 33.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Canals, &c., in Miles.	Number of Locks.
	Before the Union, so far as ascertained.	Since the Union, up to the 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
RIVER TRENT NAVIGATION.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
UPPER CANADA.							
Lock and dam at Myers' Island, about 1 mile above the mouth of the Trent, commenced and abandoned prior to Union	A 3,454 90		3,454 90		3,454 90		
Lock, canal and dam at Chisholm's Rapids	B 45,674 43	30,661 10	76,335 53		76,335 53	0.58	1
do do Crooks' Rapids (Hastings)		D 45,523 77	45,523 77		45,523 77	0.14	1
do do Whitlas' Rapids (near Peterborough)		E 25,100 95	25,100 95		25,100 95	0.17	1
do do Bobcaygean Rapids		F 32,357 56	32,357 56		32,357 56	0.28	1
do do Scugog Rapids (formerly Purdy's Mills, now Town of Lindsay)		G 26,895 95	26,895 95		26,895 95	0.04	1
Removal of obstructions to navigation on the River Scugog		H 15,469 27	15,469 27		15,469 27		
General expenditure	C 43,320 00	40,913 38	84,233 38		84,233 38		
Total, River Trent Navigation, Upper Canada......$	J * 92,449 33	I 216,921 98	309,371 31		309,371 31	1.21	5

(K.) GRAND RIVER NAVIGATION.							
UPPER CANADA.							
A Loan	2,000 00	1,302 23	3,302 23	194,559 20	197,861 43	5.25	8
(L.) DESJARDINS CANAL.							
UPPER CANADA.							
All the expenditure was before the Union, excepting $52,263.93 for interest accrued since the Union; the Government portion being a loan	68,000 00	52,263 93	120,263 93	30,684 00	150,947 93	3.85	None.

N.B.—For references A, B, C, D, E, F, G, H, I, J,* K, L, see "River Trent Navigation"—"Grand River Navigation"—and "Desjardins Canal," at the end of this Appendix.

The history and description of these works, will be found in the Report of the Commissioner of Public Works, for the fiscal year ending 30th June, 1867, and in the Appendices thereto, viz.: No. 14, pages 116 to 121. No. 15, pages 122 to 129. No. 17, pages 152 to 157.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.			
WORKS ON NAVIGABLE RIVERS.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
LOWER CANADA.						
Richelieu Rapids—Between Quebec and Montreal.	....	13,713 00	13,713 00	....	13,713 00	Experimental piers constructed between the years 1856-58, for the purpose of aiding the formation of an ice bridge above these rapids and thereby preventing the grounding and accumulation of ice on the shoals below, and the consequent inundation of low lands on both shores of the River St. Lawrence; this work not having produced the desired effect has been abandoned.
North River—Tributary of the Ottawa, upon its north side.	....	681 61	681 61	....	681 61	This expenditure was incurred by the Government in 1861 for the removal of a small shoal of boulders lying about one mile below the Village of St. Andrews, for a breadth of 50 feet and a depth of 5 feet, so as to allow vessels of 4½ feet draught of water to assend from the Ottawa River to the Village, a distance of 3½ miles.
Total Lower Canada.........	....	14,394 61	14,394 61	....	14,394 61	
UPPER CANADA.						
Narrows—Between Lake Simcoe and Lake Couchiching.	....	10,138 30	10,138 30	....	10,138 30	Channel dredged to a depth of 6 feet in 1857-58.
River Thames..........................	....	3,821 42	3,821 42	....	3,821 42	Sunken logs, &c., removed from bed of river in 1857.
Total Upper Canada........	....	13,959 72	13,959 72	....	13,959 72	
Total Works on Navigable Rivers, exclusive of those before enumerated, Lower and Upper Canada...	....	28,354 33	28,354 33	....	28,354 33	

HARBORS AND PIERS. LOWER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
AMHERST HARBOR	....	400 00	400 00	....	400 00	This harbor is situated about 140 miles south east of Percé; it has been under the control of the Quebec Trinity House since the 1st of January, 1865. No expenditure has been incurred here by the Department except for the placing and removal of buoys in 1859, 1860 and 1861.
GASPE BAY AND HARBOR	....	787 11	787 11	....	787 11	The buoys in the bay and harbor have been maintained by the Department of Public Works from 1858 to 1865—By an Order in Council dated the 8th August, 1864, they were placed under the control of the Quebec Trinity House. This harbor is 429 miles below Quebec.
LANDING PIERS BELOW QUEBEC	....	....	....	....	....	The landing piers below Quebec at the ports of Rimouski, Rivière du Loup, Malbaie, Eboulements, L'Islet and Berthier extend from the main shore outwards to a depth varying from 8½ to 18 feet at the lowest water, and from 25 to 35 feet at the highest. They are constructed in a substantial manner, of crib-work filled with stone, and planked on the top; most of the piers are provided with slips to facilitate the loading and unloading of vessels and boats, at all stages of the tide.
PIER AT RIMOUSKI	....	106,944 80	106,944 80	....	106,944 80	It lies on the south shore of the St. Lawrence, 180 miles below Quebec, and is 2,150 feet in length; the depth of water at the lowest stages of the tide is 8½ feet at its outer extremity. It was completed in 1855.
PIER AT RIVIERE DU LOUP	....	170,129 35	170,129 35	....	170,129 35	Is situated on the south shore of the St. Lawrence, 108 miles below Quebec. Its length is 1,667 feet, and the depth at extreme low water is 16 feet at its outer extremity. It was completed in 1855.
PIER AT PORT AUX QUILLES	....	103 45	103 45	....	103 45	On the north shore of the St. Lawrence 114 miles below Quebec.
PIER AT RIVIERE OUELLE	....	225,229 87	225,229 87	....	225,229 87	It lies on the south shore of the St. Lawrence, 75 miles below Quebec, at Pointe aux Orignaux. It is 1,200 feet in length. At its outer extremity, the depth at low water (spring tides) is 15 feet. It was completed in 1856.
PIER AT MALBAIE	....	53,487 20	53,487 20	....	53,487 20	It lies on the north shore of the St. Lawrence, 81 miles below Quebec, and its length is 475 feet. At its outer extremity, the depth at low water of spring tides, is 18 feet. It was completed in 1854.
PIER AT EBOULEMENTS	....	65,531 52	65,531 52	....	65,531 52	It is situated on the north shore of the St. Lawrence, 63 miles below Quebec. It projects 920 feet into the river, and at its outer extremity the depth of water at low tide, is 9½ feet. It was completed in 1853.
Carried over	....	622,613 30	622,613 30	....	622,613 30	

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.			
HARBORS AND PIERS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
LOWER CANADA.—*Continued.*						
Brought over	....	622,613 30	622,613 30	....	622,613 30	
PIER AT CRANE ISLAND	....	See Light House.	....	....	See Light House.	This pier was built for the purpose of erecting the light house thereon. It was completed in 1862, and extended in 1865-6. The first pier measures 45 feet in length by 24 feet in width and 20 feet in height. The extension measures 71½ feet in length by 82 feet in width and 15½ feet in height.
PIER AT L'ISLET	....	113,343 27	113,343 27	....	113,343 27	Is situated on the south shore of the St. Lawrence, 46¾ miles below Quebec, and its length is 1,200 feet; at its outer extremity, the depth of water is 8½ feet at the lowest stages of the tide. It was completed in 1855.
GROSSE ILE, Quarantine Station	....	17,280 28	17,280 28	....	17,280 28	It lies 33 miles below Quebec. The harbor works consist of two landing places, one for the healthy and another for the sick. The former extends 345 feet into the river at the upper end of the island and is 48 feet wide. It was completed in 1848. The latter is 128 feet long by 28 feet broad, and was completed in 1866; it is situated towards the lower end of the island.
PIER AT BERTHIER	....	37,724 14	37,724 14	....	37,724 14	It is situated on the south shore of the St. Lawreuce, 24¼ miles below Quebec, at the village of Berthier. It projects into the river 587 feet; at its outer extremity, the depth at low water of spring tides is 15 feet. It was completed in 1853.
PIER AT POINTE ST. LAURENT	....	See Light House.	....	....	See Light House.	This pier has been constructed in connection with the light house; it measures 133 feet in length by 36 feet in width.
QUEBEC HARBOR	....	....	....	....	....	Is under the management of special Commissioners.

MONTREAL HARBOR	*357,700 00	163,400 00	521,100 00	43,538 67	564,638 67	Is under the management of special Commissioners. The expenditure entered in this statement comprises the following payments (See Appendix N. p. 56, 86 and 87 of the Report of Public Works for 1848.) Paid by Debentures issued under 8 Vic., cap. 76......................£119,275 0 0 Paid under 10 and 11 Vic., cap. 56 authorizing an issue of Deben.. 1,200 0 0 Paid for monies advanced by Gov. at various times by Warrant.... 20,684 13 4 Total......................£141,159 13 4 $564,638 67 The total debt with which the Government is connected on account of this harbor, as shown by the Public Accounts for the fiscal year ending 30th June, 1867, amounts to $481,426 67.
MOORING PIERS AT THE ST. LAWRENCE RAPIDS.	....	8,859 00	8,859 00	....	8,859 00	They are 3 in number; the 1st is at the head of the Lachine Rapids, the 2nd at the foot of the Cascades, and the 3rd about 3 miles above Cedars Village. They are 70 feet long by 20 feet wide: they were built in 1856, for the safety and convenience of mail and other steamers overtaken by darknees or fogs, during the descent of the rapids between Lakes St. Francis and St. Louis.
PIER AT ST. ANICET....................	....	1,920 00	1,920 00	....	1,920 00	This pier was completed in 1862; it lies on the south shore of Lake St. Francis, and measures 300 feet in length by 18 to 34 feet in width.
Total, Harbors and Piers, L. C..$	357,700 00	965,139 99	1,322,839 99	43,538 67	1,366,378 66	
UPPER CANADA.						
PIER AT L'ORIGNAL	....	2,000 00	2,000 00	....	2,000 00	Situated on the south shore of the Ottawa River, about 6½ miles above Grenville. It was commenced under local Commissioners prior to the Union, and has since been extended 800 feet in 1857, 1858; its total length is 1,354 feet; since the Union, the work has been done by the local municipality aided by a grant of $2,000 from Government.
PICTON HARBOR........................	....	8,424 00	8,424 00	....	8,424 00	On the south side of the Bay of Quinté, Lake Ontario, 36 miles above Kingston. The principal works executed by the Department of Public Works, consist of a channel dredged to a width of 140 and a depth of 9 feet at low water from the wharves at the head of the Bay to deep water outside; they were commenced in 1857 and completed in 1862.
Carried over......	....	10,424 00	10,424 00	....	10,424 00	

APPENDIX No. 70.—*Continued.*

STATEMENT shewing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.			
HARBORS AND PIERS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
UPPER CANADA.—*Continued.*						
Brought over	....	10,424 00	10,424 00	....	10,424 00	
NAPANEE HARBOR	....	1,078 00	1,078 00	....	1,078 00	On the north side of the Bay of Quinté, about 5 miles up the River Napanee. The works executed here by the Department consist of the excavation of a channel half a mile in length, to a depth of 9 feet; they were commenced and finished in 1861.
PRESQU'ILE HARBOR	....	626 00	626 00	....	626 00	On the north shore of Lake Ontario, about 78 miles above Kingston. The works executed here by the Department consist in the placing of buoys to mark the entrance to the harbor; the buoys were first placed in 1857.
COBOURG HARBOR	* 20,010 72	41,999 98	62,010 70	....	62,010 70	On north side of Lake Ontario, about 96 miles above Kingston. The works executed consist of two piers, the united length of which is 2,047 feet. They enclose an area of 12¼ acres of water and are placed 190 feet apart at the entrance of the harbor. The depth of water in the centre of the basin is from 7 to 8 feet. The works were commenced by a Company organized under an Act of Parliament in 1829; they were assumed by Government in 1842 and sold to the Town Council of Cobourg in 1850, for the sum of $16,000. The expenditure prior to the Union was in Debentures. (See note at * in general abstract.) The sum of £10,499 19 11 ($41,999 98) was advanced since the Union and is a perpetual loan, on which interest at 6 p. cent is payable. (See Appendix N., pages 76, 77, Public Works Report, for 1848.)

Port Hope, at the mouth of Smith's Creek.	* 11,883 13	46,797 13	58,680 26	....	58,680 26	On the north shore of Lake Ontario, 102 miles above Kingston. The works consist of parallel lines of piers having an united length of 1080 feet. The harbor of which the area is about 2¾ acres can only admit vessels drawing 9 feet. This harbor is not under the management of Government. The works were commenced by a Company organized under an Act of Parliament of 20th March, 1829. The original sum owing Government was $8,000 advanced to the Company in 1832, and bearing interest at 5⅞ per cent. (See note at * in general abstract, and Appendix N., Public Works Report, for 1848, pages 76, 77.) By the Act 16 Vic., cap. 140 of 23rd May, 1853, the harbor was vested by Government in Commissioners to whom they granted a sum of $46,797 13. On 30th June, 1864, the Act 28th Vic., cap. 86, authorized the Port Hope, Lindsay and Beaverton Railway to acquire and hold this harbor.
Whitby, formerly Windsor Harbor, at Big Bay.	....	178,703 37	178,703 37	....	178,703 37	On the north shore of Lake Ontario, about 135 miles above Kingston. The works consist of a breakwater 3042 feet in length, with two parallel lines of piers 250 feet apart at the entrance of the harbor; they were commenced in 1843 and completed in 1846. The general depth of water in the harbor, which has an area of 108 acres, is from 3 to 5 feet and the portions which were dredged from 1847 to 1850 are from 10 to 12 feet in depth. The harbor was sold on the 21st March, 1864, to the present "Port Whitby Harbor Company" for the sum of $35,150.
Toronto Harbor, Queen's Wharf..	* 20,800 00	2,165 12	22,965 12	....	22,965 12	Previous to 1850 the Department had charge of the Queen's Wharf, which was constructed by local Commissioners between the years 1833 and 1837; this pier was placed under the control of the Toronto Harbor Commissioners in 1850; it is 1091 feet in length; the depth of water at its outer end is from 9 to 12 feet. The expenditure, prior to the Union, includes the raising of a large boulder, and was in debentures. (See note at * in general abstract, and Appendix N. pages 76, 77, Report of Public Works for 1848.
Oakville Harbor, at the mouth of Sixteen Mile Creek.	* 14,361 08	....	14,361 08	....	14,361 08	On the north shore of Lake Ontario, 19 miles above Toronto and 177 above Kingston. The works consist of two piers 125 feet apart and of an united length of 1562 feet; they were constructed by Mr. William Chisholm under the Act Geo. IV, cap. 19, of March, 1828. This harbor is not under the management of Government. In the return of the 27th July, 1847, before referred to, the expenditure in debentures prior to the Union is stated at £3,590 5 5 ($14,361 08) of which $10,000 bore interest at 6 per cent and was a loan to W. Chisholm. (See note at * in general abstract. Also Appendix N., Report of Public Works, for 1848, pages 76, 77.)
Carried over.........	67,054 93	281,793 60	348,848 53	....	348,848 53	

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.			
HARBORS AND PIERS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
UPPER CANADA.—*Continued.*						
Brought over	67,054 93	281,793 60	348,848 53	....	348,848 53	
Port Dalhousie—at the mouth of the Twelve Mile Creek, and at the lower terminus of the Welland Canal.	....	....	....	....	Included in Welland Canal.	On south shore at head of Lake Ontario. The works consist of two parallel piers 200 feet apart, and of an united length of 4980 feet. This harbor, which forms the lower entrance of the Welland Canal, is of sufficient depth to admit vessels drawing 10 feet water.
Port Colborne—at Gravelly Bay, or at the upper entrance of the main trunk of the Welland Canal.	....	....	....	....	do	On north shore of Lake Erie. The works consist of two piers, the longest of which on the west side is 2364 feet in length. This harbor, which forms the upper entrance of the Welland Canal has a depth of 10 feet of water in the channel between the piers, which is about 90 feet in width.
Port Maitland—at the mouth of Grand River.	....	....	....	....	do	On the north shore of Lake Erie. The works consist of two lines of piers which extend 1500 feet into the Lake; the channel between the piers is 180 feet wide, with a draught of 10 feet water. These works form the entrance to the Broad Creek Branch of the Welland Canal.
Port Dover—at the mouth of Patterson's Creek.	....	44,391 61	44,391 61	8,500 00	52,891 61	On the north shore of Lake Erie, 40 miles above Port Colborne. The works consist of two parallel piers 75 feet apart, and of an united length of 2,040 feet; the channel between the piers has a depth of 10 feet at low water. In 1837, 660 lineal feet of pier work were constructed at a cost of $8,500, by a Joint Stock Company, incorporated by the Act Will. IV, Cap. 14. On 29th

						July, 1843, the Company transferred the works to the Government who sold them to the Port Dover Harbor Company for $30,400 on 15 October, 1856, and afterwards resumed them in 1863.
Port Burwell	12,000 00	546 00	12,546 00	....	12,546 00	It lies on the north shore of Lake Erie, 90 miles above Port Colborne. The works consist of two lines of piers, 173 feet apart, the united length of which is 772 feet; they were constructed by a Company incorporated by the Act 2nd Wm. IV, cap. 15, of 28th January in 1832, and to whom a loan of £3,000 ($12,000) was granted by an Act passed on the 4th March, 1837, 7th Wm., cap. 37, to be raised upon the credit of Government Debentures at 6 per cent. The harbor was surrendered to the Government on 19th October, 1840; this surrender was annulled by the Act 23 Vic., cap. 103, of 19th May, 1860. The only expenditure by the Department of Public Works in connection with this harbor is $546 in 1842, for a survey of the same.
Port Bruce—at the mouth of Cat Fish Creek.	....	6,267 47	6,267 47	....	6,267 47	This harbor is situated on the north shore of Lake Erie, and was constructed by the "Port Bruce Harbor Company." The works consist of two piers extending into the Lake, the one 700 and the other 750 feet, and placed 115 feet apart. In 1857-58, the Government granted an aid of $6,000 to the Company.
Port Stanley—at the mouth of Kettle Creek.	* 30,000 00	230,531 88	260,531 88	....	260,531 88	On the north shore of Lake Erie, 110 miles above Port Colborne. The works consist of two piers 92 feet apart, the united length of which is 3,627 feet; they were commenced by Government Commissioners appointed under the Act 8th Geo. IV, cap. 18, of 17th February, 1827; at the Union they were placed under the control of the Board of Works; the expenditure in debentures up to that date was $30,000, of which 22,000 bore interest at 6 per cent. See Appendix N, pages 76, 77, and Note at * in General Abstract. On the 1st September, 1859, the works were transferred by Government to the London and Port Stanley Railway Company.
Rondeau Harbor....................	....	74,737 70	74,737 70	....	74,737 70	At Pointe aux Pins, on the North shore of Lake Erie, 140 miles above Port Colborne. The works consist of a breakwater enclosing a basin of 6,000 acres, with a depth of from 10 to 11 feet water; they were commenced in 1844 and suspended in 1848, when nearly completed. On the 1st of July, 1851, the harbor was sold to the Rondeau Harbor Company for $8,004; and on the 4th of August, 1856, the Government resumed possession of the harbor and placed it under the Collector of Customs at Rondeau.
Carried over................	109,054 93	638,268 26	747,323 19	8,500 00	755,823 19	

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.			
HARBORS AND PIERS.—*Contiuued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
UPPER CANADA.—*Continued.*						
Brought over..............	109,054 93	638,268 26	747,323 19	8,500 00	755,823 19	
PENETANGORE OR KINCARDINE......	....	19,044 00	19,044 00	....	19,044 00	On the eastern coast of Lake Huron, 106 miles above Port Sarnia, or the foot of the Lake. The works consist of two parallel lines of piers, 100 feet apart, and of a total length of 830 feet; they were commenced in 1856 by the Government. In 1865, $4,500 payable after the completion of the works were granted as an aid to the Municipal Council of the Township of Kincardine to improve this harbor; the Municipality was proceeding with the improvements on 30th June, 1867.
INVERHURON..............................	....	15,125 00	15,125 00	....	15,125 00	On the eastern coast of Lake Huron, 114½ miles above Port Sarnia. A pier, 150 feet in length, was built here in 1856-57, by the Government.
PORT ELGIN	....	4,000 00	4,000 00	....	4,000 00	On the east coast of Lake Huron, 128 miles above Sarnia, a pier of 380 feet in length, and extending into a depth of 13 feet water, was constructed here in 1857-58, by an incorporated Company aided by a grant of $4,000 from the Government.
SAUGEEN OR SOUTHAMPTON..........	....	10,236 39	10,236 39	....	10,236 39	At the mouth of the River Saugeen, on the east coast of Lake Huron, 133 miles above the foot of the Lake at Sarnia. The works consist of 400 feet of a breakwater constructed in 1858, by the Government. A sum of $3,500 was appropriateo as an aid to the Municipality to continue the improvements of this harbor; this sum was to be paid as soon as the works were sufficiently advanced.

CHANTRY ISLAND.....	....	31,910 95	31,910 95	....	31,910 95	About one mile off Southampton, a breakwater, 650 feet in length with 18 feet water at its outer end, was constructed by the Government in 1856, and raised in 1865, at the north-east end of the island.
OWEN SOUND..................................	....	13,000 00	13,000 00	....	13,000 00	The works consist of the improvement of the channel of the Sydenham River, from its mouth up to the Town of Owen Sound, and in forming a basin sufficiently large to admit of vessels turning within the harbor; they were executed by the Municipality of Owen Sound. In 1856 and 1866, the Government granted various sums to assist the Municipality in carrying out these improvements.
MEAFORD	....	6,000 00	6,000 00	....	6,000 00	About 20 miles west of Collingwood. In 1856 and 1857, the local Municipality aided by a Government grant, built a pier here of 500 feet in length, in a depth of 14 feet water.
Total, Harbors and Piers, Upper Canada ....$	109,054 93	737,584 60	846,639 53	8,500 00	855,139 53	
Total, Harbors and Piers, Lower Canada, brought forward ....$	357,700 00	965,139 99	1,322,839 99	43,538 67	1,366,378 66	
Total, Harbors and Piers, Upper and Lower Canada...................$	466,754 93	1,702,724 59	2,169,479 52	52,038 67	2,221,518 19	

N. B.—The Amounts marked thus * are from a Return to the Legislative Assembly, dated 27th July, 1847, showing the expenditure prior to the Union, for which Debentures were issued and forming a portion of the Debt of United Canada. See note at *, General Abstract.

The Sums spent since the Union are taken from the Books of the Department of Public Works; in these books the outlay on each of the landing piers below Quebec, is less than shown above; but they embrace a sum for General Expenditure which has been apportioned to each of these piers in this Statement.

The history and description of the harbors and piers enumerated above, will be found in the Report of the Commissioner of Public Works, for the fiscal year ending 30th June, 1867.

APPENDIX No, 70.—*Continued.*

STAETMENT showing: 1st, The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

No. of reference.	WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds so far as ascertained.	Total cost of Works, so far as ascertained, up to 30th June, 1867.	Description of Building.	Year first lighted.
		Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
	LIGHT HOUSES, BEACONS AND BUOYS, &c.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
	LOWER CANADA.							
A.	General Expenditure under Trinity Houses, before the Union, on Light Houses, Beacons and Buoys, &c.	295,866 48	....	295,866 48	....	295,866 48	....	1797 to 1841.
B.	Expenditure on Light Houses and Floating Light, before the Union	84,300 78	....	84,300 78	....	84,300 78	....	1829 to 1836.
1	**Belle-Ile** (Straits of Belle-Ile)	....	86,830 00	86,830 00	....	86,830 00	Circular tower, clap boarded and painted white....	1858.
2	**Amour Point**	....	86,626 67	86,626 67	....	86,626 67	do	1858.
3	**Cap Rosier**	....	75,986 70	75,986 70	....	75,986 70	Circular stone tower, faced with white brick......	1858.
4	**Anticosti** (3 light houses)	....	72,802 00	72,802 00	....	72,802 00	Conical, of grey stone.......	1831, 1835, 1858.
5	**Father Point**	....	1,453 61	1,453 61	....	1,453 61	Octogonal of wood white........	1859.
6	**Brandy Pots**	....	2,871 70	2,871 70	....	2,871 70	Circular, of brick, painted drab......	1862.
7	**Long Pilgrims**	....	2,904 10	2,904 10	....	2,904 10	do	1862.
8	**Grande Ile de Kamouraska**	....	2,113 71	2,113 71	....	2,113 71	Wood, square......	

9	Crane Island	....	10,334 42		10,334 42	....	10,334 42	Wood, octagonal.	
10	Bellechasse Island	....	1,914 76		1,914 76	....	1,914 76	Wood, square	
11	Pointe St. Laurent (unfinished)	....	8,416 58		8,416 58	....	8,416 58	....	
12	River Light Houses, Port of Montreal	....	3,878 67		3,878 67	....	3,878 67	....	1843.
13	Lachine	....	1,000 00		1,000 00	....	1,000 00	Square, wood, white	1849.
14	Light Ships, Nos. 1, 2 and 3, Lake St. Louis	....	26,397 93		26,397 93	....	26,397 93	Circular, of iron, red	1850.
15	Pointe Claire, Light Ship	....	4,400 00		4,400 00	....	4,400 00	Iron	1860.
16	Pointe Claire, Pier Light	....	4,101 88		4,101 88	....	4,101 88	Wood	1860.
17	Green Shoal								
18	Knight's Point	....	1,000 00		1,000 00	....	1,000 00	do red.....	1848.
19	Grosse Pointe	....	1,000 00		1,000 00	....	1,000 00	do do	1846.
	General expenditure on surveys for Light Houses—Lower St. Lawrence, at Nos. 1, 2, 3, 4, &c.	....	15,601 59	C	150,461 93	....	150,461 93		
	General expenditure for lighting apparatus of Nos. 1, 2, 3, 4, &c., Lower St. Lawrence	....	54,602 16						
	General expenditure for vessels conveying workmen and materials, engineering &c., for Nos. 1, 2, 3, 4	....	80,258 18						
	General expenditure, surveys	....	15,157 97	D	15,157 97	....	15,157 97		
	Engineering, lighting apparatus, &c., Nos. 6, 7, 8, 9, 10								
	General expenditure, Nos. 16 and 17	....	378 16	E	378 16	....	378 16		
	Total Expenditure, Lower Canada..$	380,167 26	560,030 79		940,198 05	....	940,198 05		

N.B.—For references A, B, C, D, E, and Nos. 1 to 19—see "Light Houses, Beacons and Buoys," at end of this Appendix.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

No. of reference.	WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Description of Building.	Year first lighted.
		Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
	LIGHT HOUSES, BEACONS AND BUOYS, &c.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
	UPPER CANADA.							
	General expenditure, before the Union, on Light Houses, Beacons and Buoys, &c.	F 98,550 51	....	98,550 51	....	98,550 51	....	1826 to 1841.
20	Lancaster Pier	....	788 07	788 07	....	788 07	Square, wood	1844.
21	Snake Island	....	8,611 00	8,611 00	....	8,611 00	Stone, square	1858.
22	Point Pleasant	....	2,819 42	2,819 42	....	2,819 42	Octagonal, wood	1866.
23	Presqu'Ile	....	1,200 00	1,200 00	....	1,200 00	Octagonal, stone	1840.
24	Gull Island	....	2,286 72	2,286 72	....	Up to 31st Dec., 1849. 2,286 72	do do	1840.
25	Mohawk Island	....	5,000 00	5,000 00	....	5,000 00	Round, stone	1848.
26	Port Maitland	....	800 00	800 00	....	800 00	Square, wood, white	1848.
27	Long Point	....	9,094 45	9,094 45	....	9,094 45	Octagonal, wood	1843.
28	Point Pelee Reef	....	69,160 30	69,160 30	....	69,160 30	....	1861.
29	Goderich	....	1,969 40	1,969 40	....	1,969 30	Square tower	1846.
30	Point Clark	....	14,120 00	14,120 00	....	14,120 00	Stone, stone color	1859.

31	Chantry Island	....	14,120 00	14,120 00	....	14,120 00	do	1859.
32	Isle of Coves	....	14,120 00	14,120 00	....	14,120 00	do	1859.
33	Griffth Island	....	14,120 00	14,120 00	....	14,120 00	do	1859.
34	Nottawasaga Island	....	14,120 00	14,120 00	....	14,120 00	do	1859.
35	Christian Island	....	11,800 00	11,860 00	....	11,800 00	do	1859.
36	Killarney (2 light houses)	....	3,500 00	3,500 00	....	3,500 00	Wood, white ...	1867.
37	Little Current (2 light houses)						do	1867.
38	Clapperton Island						do	1867.
39	St. Ignace Island						do	1867.
	General expenditure for surveys, vessels conveying workmen and materials, lighting apparatus, engineering, chargeable to the following light houses, viz:							
	No. 21	....	1,819 04	1,819 04	....	1,819 04		
	No. 22	....	1,524 70	1,524 70	....	1,524 70		
	Nos. 30 to 35, (both inclusive)	....	140,163 91	140,163 91	....	140,163 91		
	Nos. 36 to 39, do	....	188 27	188 27	....	188 27		
	General expenditure, light keepers' dwellings	....	G 19,685 91	19,685 91	....	19,685 91		
	General expenditure on Light Houses, Beacons and Buoys, &c., not enumerated in this statement	....	H 91,738 44	91,738 44	....	91,738 44		
	Total expenditure on Light Houses, Beacons and Buoys.—Upper Canada ....$	98,550 51	442,749 63	541,300 14	....	541,300 14		
	do Lower Canada, (brought forward)	380,167 26	560,030 79	940,198 05	....	940,198 05		
	Total, Lower and Upper Canada (J) ....$	478,717 77	I. 1,002,780 42	1,481,498 19	....	1,481,498 19		

N.B.—For references F, G, H, I, J, and Nos. 20 to 39, see "Light Houses, Beacons and Buoys" at end of this Appendix.

For Statement showing names, positions, characteristics, dimensions, &c., of the Light Houses, Beacons and Buoys of Canada, constructed, in progress of construction or managed by the Department of Public Works, and the Trinity Houses of Quebec and Montreal, and also of those in charge of Private Individuals and Companies.—See Appendix No. 10, pages 71 to 95.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Number.	Dimensions in Feet.		Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.
		Length.	Breadth.	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.		
SLIDES, DAMS, PIERS AND BOOMS,				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
(*To facilitate the Descent of Timber.*)								
LOWER CANADA.								
River Saguenay, (length about 138 miles), at 105 miles above its outlet on the St. Lawrence—								
Slide for single sticks	1	5,840	5	A	44,872 79	44,872 79	....	B 44,872 79
Flat dams	7	919	....					
Pier dam	1	40	....					
Glance piers	2	....	....					
Booms	1	1,344	1$\frac{2}{12}$					
Store house	1	24	24					
River St. Maurice, (length about 300 miles), at its mouth and on its main trunk, at the Shawenegan Falls, Grand-Mère Falls, Little Piles Falls, La Tuque Falls and Plamondon's Eddy, 106 miles above outlet on the St. Lawrence—								
Slides for single sticks	2	1,000	....	C	263,875 95	269,043 03	D	E 269,043 03
Dams and side piers	....	3,316	....					
Mooring piers	73	25	25					
Anchor piers	64	15	15					
Booms	....	43,181	3					
Slide keepers' houses	3	....	....					
Store houses	6	....	....					

Vermilion River, 116 miles above mouth of St. Maurice : A tributary from the North-West, about 90 miles in length; works commence 1 mile above mouth and extend up to and beyond Iroquois Falls, 6 miles above outlet of Vermilion—								
Slide for single sticks, at Iroquois Falls, resting on 17 piers	1	550	....					
Dams and side piers, at Iroquois Falls, includes 391 at mouth of River	....	682	....					
Mooring piers, do.	2	25	25	....	2,471 56			
Anchor pier, do.	1	15	15					
Booms, do.	....	2,677	2					
Slide keeper's house	1	....	....					
Store house	1	....	....					
The above slide and other works constructed at Iroquois Falls, since 1858, by Messrs. Broster, Gouin, Quinn and others, were purchased by the Government, in May, 1866, for the sum of	....	....	....	....	2,695 52			

N.B.—For references A, B, C, D, E,—see "River Saguenay Slides" and "River St. Maurice Slides," at end of this Appendix.

The history and description of the slides, &c., on the Saguenay and St. Maurice, will be found in the Report of the Commissioner of Public Works, for the fiscal year ending 30th June, 1867, and in the Appendices thereto, viz: Nos. 11, 12, pages 96 to 103 and No. 17, pages 132 to 135.

LOWER AND UPPER CANADA.				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
River Ottawa, (length about 700 miles) on its main trunk, at Carillon, Hull or North Chaudière, City of Ottawa or South Chaudière, Little Chaudière, Remous, Chats Rapids, Head of Chats, Chenaux, Portage du Fort, Mountain, Calumet and the Joachim Rapids—		*						
Canals (1 at Chats Rapids 1700, feet,—1 at Calumet, 300 feet)	2	2,000	....	*				
Slides for cribs	14	3,834	26					
Dams	20	8,655	....					
Piers	52	....	....					
Booms	....	29,855	....					
Bulkheads	....	345	....					
Slide keepers' houses	3	....	....					
Store houses	3	....	....					
The cost of these works, is as follows, viz:—								
At Carillon.........Pier dams, included above	....	....	....	....	28,458 13	28,458 13		
At Hull or North Chaudière....2 Slides, Dams, Piers, Booms, &c., included above	....	....	....	....	5,270 00	45,270 00	A †	
do do ....Old slide built by P. Wright in 1829, purchased 6 Oct., 1849	....	....	....	....	40,000 00			
At Ottawa or South Chaudière.4 Slides, Dams, Piers, Booms, &c., included above	....	....	....	....	58,839 36	58,839 36	B †	
At Little Chaudière.........1 Slide, Dam, Pier, Boom, &c., included above	....	....	....	....	17,816 93	17,816 93		
Carried over	....	....	....	....	150,384 42	150,384 42		

N.B.—For references *, A, B, †, see "River Ottawa Slides," at end of this Appendix.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Number.	Dimensions in Feet.		Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total cost of Works, so far as ascertained, up to 30th June, 1867.
		Length.	Breadth.	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.		
SLIDES, DAMS, PIERS AND BOOMS.—*Continued.*								
LOWER AND UPPER CANADA.—*Continued.*				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
River Ottawa, &c.—*Continued.*								
Brought over					150,384 42	150,384 42		
The cost of these works, is as follows, viz:—								
At Remous.....Boom and Piers, included above					4,767 76	4,767 76		290,904 11
At Chats Rapids.....1 Slide, Canal, Dam, &c., included above					23,355 04	23,355 04	C †	
At Head of Chats.....Piers, included above					935 67	935 67		
At Chenaux.....Piers and Boom, included above					4,488 71	4,488 71		
At Portage du Fort.....1 Slide, Piers, and Boom, included above					8,467 77	10,167 77		
do do.....Old Slide built in 1838-39, rebuilt in 1841, and purchased 16th April, 1845					1,700 00		D †	
At Mountain.....1 Slide and Boom, &c., included above					21,866 67	21,866 67		
At Calumet.....1 Slide, Canal, Piers, Booms, &c., included above					43,805 17	49,805 17		
do.....Old Slide built by D. Moore, prior to 1843, in Rocher Fendu Channel, rendered useless by construction of new work in South Channel,—compensation paid 15th Oct., 1861					6,000 00		E †	
At Deux Joachims.....2 Slides, Dams, Piers, Booms, &c., included above					25,132 90	25,182 90		
Total, on Main Trunk of the Ottawa.....$					290,904 11	290,904 11		

TRIBUTARIES OF THE OTTAWA.

Gatineau River, 96 miles above mouth of Ottawa at Ste. Anne—								
A tributary from the North, about 400 miles long—								
Canals (Old Canal, 2191 feet. New Canal, 880 feet)	2	3,071	......	......	31,967 83	31,967 83		224,163 99
Booms	......	4,138	......					
Piers	10	......	......					
Bridge	1	52	......					
Slide keeper's house	1	......	......					
Madawaska River, 136 miles above mouth of Ottawa at Ste. Anne—								
A tributary from the South, about 240 miles in length—								
Slide for cribs	1	180	26	......	76,727 37	76,727 37	F †	
Slides for single sticks	5	1,570	6					
Dams	30	4,080	......					
Piers	43	......	......					
Booms	......	18,179	......					
Slide keepers's house	1	......	......					
Work shop	1	......	......					
Coulonge River, 184 miles above mouth of Ottawa at Ste. Anne—								
A tributary from the North, about 160 miles in length—								
Slide for single sticks	1	2,956	6	......	24,690 60	29,032 78	G †	
Dam	1	173	......					
Slide keeper's house	1	31	32					
Old works necessary to the working of the new slide, purchased from private parties under an Award of 20th Feb., 1867	......	......	......	......	4,342 18			
Black River, 193 miles above mouth of Ottawa at Ste. Anne—								
A tributary from the North, about 128 miles in length—								
Slide for single sticks	1	873	......	......	10,000 00	10,000 00	H †	
Glance pier	1	346	18					
Flat dam	1	135	......					
Single stick boom	......	1,139	......					
These works were constructed by the late D. Moore about 30 years ago, and were renewed at various times; they were purchased by Government in 1867, from Mr. Poupore, M. P. P., at a price fixed upon by arbitration, and amounting to the sum of $12500, on which has been paid the sum of $10,000	......	......	......					
Petewawa River, 218 miles above mouth of Ottawa at Ste. Anne—								
A tributary from the South, about 138 miles in length—								
On Main Trunk of River—								
Slides for single sticks	4	2,963	6	......	28,859 07			
Dams	8	2,077	......					

N. B.—For references * A, B, C, D, F, F, G, H, I, J, †—see "Ottawa Slides, &c.," at end of this Appendix.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Number.	DIMENSIONS IN FEET.		EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.
		Length.	Breadth.	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.		
SLIDES, DAMS, PIERS AND BOOMS.—*Continued.*				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
LOWER AND UPPER CANADA.—*Continued.* TRIBUTARIES OF THE OTTAWA.—*Continued.*								
PETEWAWA RIVER—*Continued.*								
ON MAIN TRUNK OF RIVER—								
Booms	8	8,469	6					
Piers	7	....	....					
ON THE NORTH BRANCH—								
Slides for single sticks	2	480	6	....	32,274 94	67,634 01	....	
Dams	20	1,131	....					
Booms	3	2,671	....					
Piers	23	....	....					
ON THE SOUTH BRANCH—								
Slides for single sticks	8	2,134	6	....	6,500 00			
Dams	6	388	....					
RIVIERE DU MOINE, 256 mils above mouth of Ottawa at Ste. Anne—								
A tributary from the North, about 120 miles in length—								
Slides for single sticks	1	300	5	....	8,802 00	8,802 00	I †	
Dams	13	1,324	....					
Booms	2	800	....					
Piers	6	....	....					
				....	515,068 10	515,068 10	....	515,068 00

Expenditure up to 31st March, 1846. For purchase of land and reconstruction of portion of slides, constructed in 1843–4, at the Calumet, Mountain, Joachims and on the River Madawaska, the same having been placed at too high a level or carried away by freshets owing to defective construction. (See Report of Public Works for 1845. Schedule B)	61,590 75
General expenditure on all the works, including surveys and engineering, &c	142,588 28
Total Government expenditure on Slides, Dams, Piers and Booms, &c., on the River Ottawa and its tributaries (J)	719,247 13

ABSTRACT.

OTTAWA SLIDES, DAMS, PIERS AND BOOMS.

In Lower Canada—								
All the Works, excepting at South Chaudière and on the Rivers Madawaska and Petewawa	....	....	....	....	311,867 36	311,867 36	....	311,867 36
Proportion of expenditure for land, &c	....	....	....	....	37,000 00	37,000 00	....	37,000 00
Proportion of general expenditure	....	....	....	....	86,000 00	86,000 00	....	86,000 00
Total, Lower Canada	....	....	....	....	434,867 36	434,867 36	....	434,867 36
In Upper Canada—								
Works at South Chaudière, and on the Madawaska and Petewawa	....	....	....	....	203,200 74	203,200 74	....	203,200 74
Proportion of expenditure for land, &c	....	....	....	....	24,590 75	24,590 75	....	24,590 75
Proportion of general expenditure	....	....	....	....	56,588 28	56,588 28	....	56,588 28
Total, Upper Canada	....	....	....	....	284,379 77	284,379 77	....	284,379 76
Total as above	....	....	....	....	719,247 13	719,247 13	....	719,247 13

N. B.—For references * A, B, C, D, E, F, G, H, I, J, †—see "Ottawa Slides &c.," at end of this Appendix.

The history and discription of the Slides, &c., on the Ottawa, will be found in the Report of the Commissioner of Public Works for the fiscal year ending 30th June, 1867, and in Appendices thereto, viz: No. 13, pages 103 to 115, and No. 17, pages 134 to 152.

UPPER CANADA.

River Trent.

Trenton, at mouth of the Trent—								
Booms and Piers	....	....	....	A	3,121 45	....	....	....
Widow Harris' Rapids, 9 miles above mouth of the Trent—								
Dams of boulders	2	1,265	Base. 10	B	6,588 65	....	....	....
Chisholm's Rapids, 15½ miles above mouth of the Trent—								
Dam of truss-work	1	715	32	C	In gen. expen.	....	....	....
Slide for cribs	1	100	50					
arried over	....	....	....	....	9,710 10	....	....	....

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Number.	Dimensions in feet.		Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.
		Length.	Breadth.	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.		
SLIDES, DAMS, PIERS AND BOOMS.—*Continued.*								
UPPER CANADA.—*Continued.*				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
River Trent.—*Continued.*								
Brought over	....	....	....	....	9,710 10			
Percy Landing, 28¼ milles above mouth of the Trent—								
Piers and Booms, carried away by floods, or otherwise removed	....	....	....	None.	In general expenditure.			
Myer's Island—								
Dam	1	167	....	None.	In general expenditure.			
Ranney's Falls, 33½ miles above mouth of Trent—								
Slides for cribs	2	1,492	33	None.	47,107 55			
Canal connecting the two slides	1	610	....					
Dam of truss-work	1	414	33					
Guide booms of three sticks in width	....	1,352	3½					
Campbellford or Seymour, 34¾ miles above mouth of the Trent—								
Guide booms	....	1,100	3½	None.	In general expenditure.			
Fiddler's Island, 36 miles above mouth of the Trent—								
Dams of crib-work	2	400	14	None.	888 05			
Major Campbell's dam	....	....	....	....	1,583 12			
Middle Falls, 37½ miles above mouth of the Trent—								
Slides for cribs	2	515	33	None.	20.911 08			
Dams of truss-work, &c	4	830	8 to 25					

Foot of Crow Bay, 38 miles above mouth of the Trent—								
Retaining boom (single stick)	....	2,600	$1\frac{2}{12}$	None.	In general expenditure.			
Heely's Falls, 42½ miles above mouth of the Trent—								
Slides for cribs	2	1,073	33	D	38,985 67			
Glance boom (composed of 6 sticks)	1	713	....					
Dam of truss-work	1	488	33					
Slide keeper's house of wood	1	....	....					
Crooks' Rapids, 54½ miles above mouth of the Trent—								
Slide for cribs	1	79	33½	E	In general expenditure.			
Dam of truss-work	1	253	27					
Slide and Lock keeper's house of stone	1	32	24					
Whitlas Rapids, 93 miles above mouth of the Trent—								
Dams of truss-work	2	483½	27	F				
Litle Lake, near Peterborough, 94 miles above mouth of the Trent—								
Piers	3	....	....	None.	In general expenditure.			
Boom (single stick)	1	3,960	....					
Buckhorn Rapids, 125 miles above mouth of the Trent—								
Slide for cribs	1	65	33	G	10,515 55	....	†	
Guide booms	2	900	1¼ to 3½					
Dam of stones	1	173	8					
do of truss-work	1	387	25					
Bobcaygean Rapids, 140¾ above mouth of the Trent—								
Slide for cribs	1	30	33	H	12,686 15			
Dam of truss-work	1	468	25					
do of crib-work	1	794	15					
Scugog Rapids, at Town of Lindsay, 161¼ miles above mouth of the Trent—								
Crib slide through old lock	1	65	33	I	In general expenditure.			
Dam at head of slide	1	280	30					
Expenditure before the Union under Commissionners, River Trent Navigation, at A, B, C	....	....	....	J* 41,822 67				
Expenditure before the Union under Commissioners, Inland Water—Newcastle District, at D, E, F, G, H, I	....	....	....	K* 43,320 00				
General expenditure on all the works since the Union	....	....	....	L	85,964 78			
Total, Government Expenditure on Construction of River Trent Slides, Dams, Piers, Booms, &c. $	....	....	....	M 85,142 67	N228,347 05	313,489 72	....	313,489 72

N. B.—For references A, B, C, D, E, F, G, H, I, J*, K*, L, M, N,—see "Trent River Slides, &c.," at end of this Appendix.

The history and description of all the works on the River Trent will be found in the Report of the Commissioner of Public Works for the fiscal year ending 30th June, 1867, and in the Appendices thereto, viz:—No. 14, pages 116 to 121; No. 15, pages 122 to 129, and No. 17, pages 152 to 157.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Number.	Dimensions in Feet. Length.	Dimensions in Feet. Breadth.	Expenditure from Funds of Provincial Government. Before the Union, so far as ascertained.	Expenditure from Funds of Provincial Government. Since the Union, up to 30th June, 1867.	Expenditure from Funds of Provincial Government. Total Government expenditure up to 30th June, 1867.	Expenditure from other than Government. Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.
ABSTRACT OF EXPENDITURE.								
ON SLIDES, DAMS, PIER AND BOOMS.				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
In Lower Canada, River Ssguenay	....	....	....	....	44,872 79	44,872 79	....	44,872 79
do St. Maurice	....	....	....	....	269,043 03	269,043 03	....	269,043 03
do Ottawa	....	....	....	....	434,867 36	434,867 36	....	434,867 36
Total, Lower Canada $	....	....	....	....	748,783 18	748,783 18	....	748,783 18
In Upper Canada, River Ottawa	....	....	....	....	284,379 77	284,379 77	....	284,379 77
do Trent	....	....	....	85,142 67	228,347 05	313,489 72	....	313,489 72
Total, Upper Canada $	....	....	....	85,142 67	512,726 82	597,869 49	....	597,869 49
Total, Slides, Dams, Piers and Booms.—Lower and Upper Canada $	....	....	....	85,142 67	1,261,510 00	1,346,652 67	....	1,346,652 67

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1sts July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Road completed in Miles.
	Before the Union, so far as ascertained.	Since the Union, up to the 30th June, 1867.	Total Government expenditure up to 30th June, 1867.			
ROADS. LOWER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
Internal communication and improvements from 1799 to 10th Feb., 1841...	A 712,048 03	....	712,048 03	....	712,048 03	Not ascertained. Included below in G.
KENNEBEC ROAD	B 4,800 00	....	6,800 00	....	6,800 00	
Other than through the Department of Public Works	....	C 2,000 00				
Through the Department of Public Works since the Union, $13,022.13, included below at F.						
KEMPT ROAD, the expenditure before the Union being from 1829 to 1832, and that since the Union being through the Department of Public Works...	D 29,064 00	Not in App. No. 19. E 516 20	29,580 20	....	29,580 20	97.75
Expenditure since the Union, on main roads, &c., Lower Canada, as enumerated in Appendix No. 19, pages 166 to 170	....	F 1,015,462 78	1,015,462 78	....	1,015,462 78	1089.91
	745,912 03	1,017,978 98	1,763,891 01	....	1,763,891 01	G 1187.66
Deduct cost of following bridges included in the cost of roads since the Union, in Appendix No. 19:—						
Bridges on Gaspé, Kempt Road $17,818 21						
do Metapediac, do 39,867 60						
do Temiscouata, do 22,580 66						
Bridge on River Beaudet, do 1,062 28						
do River Malbaie, do 200 00						
Total, Deduction for Bridges (see Bridges, App. No. 20, p. 180 to 187.. $81,528 75	....	H 81,528 75	81,528 75	....	81,528 75	
Total, Main Roads, &c., Lower Canada, exclusive of Bridges enumerated above and charged hereafter in the list of "Bridges;"—exclusive also of "Turnpike and Colonization Roads"	745,912 03	936,450 23	1,682,362 26	....	1,682,362 26	1187.66

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Road completed in Miles.
	Before the Union, so far as ascertained.	Since the Union, up to the 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.			
TURNPIKE ROADS.						
LOWER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
I—Quebec Turnpike Roads, North Shore	J 135,400 00		135,400 00	K 509,490 00	644,890 00	110.29
L—Quebec Turnpike Roads, South Shore				M 155,978 00	155,978 00	33.00
N—Longueuil and Chambly Turnpike Road, in Debentures	O 60,000 00	P 20,588 55	94,138 45	40,348 23	134,486 68	16.00
Ferry, Longueuil to Montreal		Q 13,549 90				
R—Montreal Turnpike Roads	S 188,000 00		188,000 00	T 230,359 20	418,359 20	55.24
U— Total, Turnpike Roads, Lower Canada	383,400 00	34,138 45	417,538 45	936,175 43	1,353,713 88	214.53
V— **COLONIZATION ROADS.**						
LOWER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
Name of Division. *Name of County.*						
GASPE Gaspé		18,964 39	154,734 09		154,734 09	
Bonaventure		22,508 00				
Rimouski		20,622 79				
Temiscouata		15,989 00				
Kamouraska		26,374 41				
L'Islet		15,900 00				
Montmagny		17,658 10				
Bellechasse		16,717 40				
EASTERN TOWNSHIPS. Dorchester		19,098 58				
Levis		2,300 00				
Beauce		17,525 00				
Megantic		18,330 00				

	Lotbinière	....	6,200 00	205,260 67	....	205,260 67	
	Nicolet	....	11,560 00				
	Nicolet and Arthabaska	....	500 00				
	Arthabaska and Drummond	....	20,600 00				
	Wolfe and Richmond	....	17,270 80				
	Compton	....	28,015 93				
	Stanstead	....	800 00				
	Shefford	....	6,900 00				
	Brome	....	11,110 43				
	Sherbrooke	....	600 00				
	Beauharnois	....	950 00				
	Eastern Townships	....	43,500 00				
OTTAWA	Terrebonne	....	9,888 22	89,424 86	....	89,424 86	
	Two Mountains	....	3,700 00				
	Vaudreuil	....	1,600 00				
	Argenteuil	....	17,900 00				
	Argenteuil and Ottawa	....	400 00				
	Ottawa and Pontiac	....	55,936 64				
ST. MAURICE	Portneuf	....	17,350 00	102,051 25	....	102,051 25	
	Champlain	....	21,992 93				
	St. Maurice	....	16,027 49				
	Maskinongé	....	9,072 37				
	Berthier	....	6,631 00				
	Berthier and Joliette	....	7,163 46				
	Joliette	....	7,760 00				
	Terrebonne and Montcalm	....	1,500 00				
	Montcalm	....	14,554 00				
SAGUENAY	Chicoutimi and Saguenay	....	71,716 51	124,071 85	....	124,071 85	
	Chicoutimi and Charlevoix	....	17,953 88				
	Saguenay and Charlevoix	....	1,100 00				
	Charlevoix	....	9,135 00				
	Montmorency	....	9,148 27				
	Quebec	....	15,018 19				
TACHE ROAD	Counties of Gaspé, Bonaventure, Rimouski, Kamouraska, L'Islet, Montmagny and Bellechasse	....	48,762 39	48,762 39	....	48,762 39	
Total, Colonization Roads, Lower Canada		..................$	V 724,305 11	724,305 11	....	724,305 11	Not ascertained.
Total, Main Roads, and Branch Roads, Lower Canada, brought down		745,912 03	936,450 23	1,682,362 26	....	1,682,362 26	1187.66
Total, Turnpike Roads, Lower Canada, brought down		383,400 00	34,138 45	417,538 45	936,175 43	1,353,713 88	214.53
Total, Roads, Lower Canada $		1,129,312 03	1,694,893 79	2,824,205 82	936,175 43	3,760,381 25	1402.19

For references, Lower Canada Roads, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, see note under that head at the end of this Appendix

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Road completed in Miles.
	Before the Union, so far as ascertained.	Since the Union, up to the 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.			
ROADS.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
UPPER CANADA.						
BROCKVILLE and ST. FRANCIS	* 29,727 85	....	29,727 85	....	29,727 85	
A—KINGSTON and NAPANEE	* 156,599 85	4,373 30	160,973 15	....	160,973 15	25.00
B—EAST YORK Road Trust	* 97,497 45	25,672 13	123,169 58	....	123,169 58	17.00
C—WEST YORK Road Trust	* 104,928 08	....	104,928 08	....	104,928 08	16.25
D—YONGE STREET Road Trust	* 168,424 43	163,418 28	335,842 71	....	335,842 71	33.50
E—WEST GWILLIAMSBURG—Road and Bridge	* 4,000 00					3.00
F—QUEENSTON and GRIMSBY	* 78,504 77	45,609 08	124,113 85	....	124,113 85	31.25
G—HAMILTON and BRANTFORD	* 174,671 08	39,953 35	214,624 43	....	214,624 43	23.75
H—ERIE and ONTARIO Railroad Company	* 20,987 92	....	20,987 92	....	20,987 92	
I—DUNDAS and WATERLOO	* 111,645 17	....	111,645 17	....	111,645 17	
$	J 946,986 60	279,026 14	1,226,012 74	....	1,226,012 74	149.75

K—JOHNSTOWN District	27,022 22		27,022 22		27,022 22	
Expenditure since the Union on Roads in Upper Canada, as enumerated in Appendix No. 19, pages 170 to 173,—deducting those entered above		1,021,538 36	1,021,538 36		1,021,538 36	1,189.45
$	974,008 82	1,300,564 50	2,274,573 32		2,274,573 32	1,339.20
Deduct cost of following bridges included in the cost of roads, since the Union, in Appendix No. 19—						
Rideau Bridge, Ottawa and L'Orignal Road $1,200 00						
Delaware Bridge, London and Chatham Road 6,806 97						
Port Stanley Bridge, Port Stanley and London Road 1,560 00						
Total, Deduction for Bridges (see App. No. 20, pages 187 to 191) $9,566 97		9,566 97	9,566 97		9,566 97	
Total, Main Roads, &c., in Upper Canada, exclusive of Bridges enumerated above and charged hereafter in list of "Bridges" $	974,008 82	1,290,997 53	2,265,006 35		2,265,006 35	1,339.20
Colonization Roads, Upper Canada		L 848,617 34	848,617 34		848,617 34	Not ascertained.
Total, Roads, Upper Canada $	974,008 82	2,139,614 87	3,113,623 69		3,113,623 69	
Total, Roads, Lower Canada, brought down $	1,129,312 03	1,694,893 79	2,824,205 82	936,175 43	3,760,381 25	1,402.19
† Total, Roads, Lower and Upper Canada, inclusive of Turnpike and Colonization Roads $	2,103,320 85	3,834,508 66	5,937,829 51	936,175 43	6,874,004 94	2,741.39

N.B.—For references, Upper Canada, A, B, C, D, E, F, G, H, I, J, K, L, *—see notes under that head, at end of this Appendix.

For description and list of Roads—see Report of the Commissioner of Public Works, for the fiscal year ending 30th June, 1867—also Appendices thereto, viz: No. 18, pages 158 to 165,—No. 19, pages 166 to 179—No. 20½, pages 192 to 198.

† A list of the Roads no longer under the control of the Department of Public Works, will be found in Appendix No. 26, pages 312 to 320.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Number of Bridges.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.			
BRIDGES.						
LOWER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
Bridges enumerated in Appendix No. 20, pages 180 to 187 inclusive (see Bridges No. 1 to No. 131 inclusive)	A Included in Internal Communication and Improvements (see Roads.)	B 353,357 81	353,357 81	....	353,357 81	C 131
UPPER CANADA.						
Number of Bridge in Appendix No. 20:—						
No. 150.—Trent Bridge across mouth of River Trent, at Village of Trenton	D* 19,200 00					
No. 167.—Dunville Bridge	E* 6,800 00					
No. 169.—Brantford do	F* 8,000 00	....	50,000 00			
No. 170.—Paris do	G* 8,000 00			....	256,927 27	I 44
No. 174.—Chatham do	H* 8,000 00					
Bridges enumerated in Appendix No. 20, pages 188 to 191 inclusive (see Bridges No. 132 to No. 175 inclusive)	....	J 206,927 27	206,927 27			
Total, Bridges, Lower and Upper Canada........ (L) ....$	50,000 00	560,285 08	610,285 08	....	K 610,285 08	175

N.B.—For references A, B, C, D, E, F, G, H, I, J, K, L, *,—see "Bridges, Lower and Upper Canada," at the end of this Appendix.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
PUBLIC BUILDINGS.							
LOWER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
HOUSES OF PARLIAMENT.							
QUEBEC— Old Parliament House.........	67,370 76	62,143 75	129,514 51	....	148,442 64	248	The site upon which this edifice stands, and the former structures thereon, were acquired from the Roman Catholic Bishop of Quebec, on 1st August, 1831, for a perpetual and unredeemable ground rent of £1000 sterling—$4,866.67—see Appendix No. 27, at page 322. The former Parliament House was erected from 1830 to 1836, at the cost stated. See page 15 "Return of annual revenue and expenditure for Lower and Upper Canada before the Union," printed by Order of the Legislative Assembly, and dated 1847. Of the amount expended since the Union, $54,385.43, was for the reconstruction of the south eastern wing, in 1851-2, $7,758.32 to improve the remainder of the building, and the balance ($18,928.13) to fit up and furnish the same for the use of the Legislature, in 1851-2. The whole building was destroyed by fire in 1854.
do fitting up and furniture	....	18,928 13	18,928 13	....			
Carried over............	67,370 76	81,071 88	148,442 64	....	148,442 64		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*							
LOWER CANADA.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
HOUSES OF PARLIAMENT.—*Continued.*							
Brought over..........	67,370 76	81,071 88	143,442 64	....	143,442 64		
Grey Nunnery, used as a Parliament House.	....	27,518 58	27,518 58	....	75,424 58	248	This outlay was made for the fitting up of the building, for the use of the Legislature, after the destruction of the Parliament House, by fire in 1854. It was destroyed by fire and had to be rebuilt at the expense of the Province.
do rebuilt..........	....	47,906 00	47,906 00	....			This sum was paid by Government in 1856, through Finance Department.
New Parliament House......	....	61,514 77	61,514 77	....	61,514 77	248	This edifice was constructed on the site of the former Parliament House, in 1859 and 1860, for a Post Office, but has been occupied since the time of its completion, as a Parliament House.
MONTREAL—							
Parliament House (St. Ann's Market Hall).	....	....	....	About 60,000 00	60,000 00	249	It was leased in 1844 for the use of the Legislature, on its removal from Kingston, for a term of 8 years at the rate of $1,036, for the first 3 years, and $6,000 for the remainder of the term; the entire building was destroyed by fire on the 26th April, 1849.
do converting Hall into Parliament House.	....	17,282 81	17,282 81	....	17,282 81		

GOVERNMENT HOUSES.

QUEBEC—							
SPENCER WOOD (Including $40,000 for purchase of property.)	......	182,657 70	182,657 70	......	210,673 41	252	This property was purchased in 1852-54, for the sum of $40,000. See Appendix No. 27, page 322; the sum of £8,000 shewn therein for the sale in 1852, is included in the sale of 1854, for £10,000. The sale of £100 in 1854, was for land at Spencer Cove, and will be found at the end of this list in Miscellaneous. From 1851 to 1856, a sum of $142,657.70 was spent for the construction of a new wing, outbuildings, &c. The whole of the state portion of the building was destroyed by fire on the 28th February 1860.
do rebuilt......	......	28,015 71	28,015 71	......			The building was reconstructed in 1862-63.
CATARAQUI......	......	17,891 67	17,891 67	......	17,891 67	252	This property was leased in 1860, from Henry Burstall, Esq., at an annual rental of $1,600, as a temporary residence for His Excellency. Of the amount entered as total expenditure, $9,991.67, was expended for the erection of a guard-house and kitchen, &c., and the balance ($7,900) was paid to Mr. Burstall according to an agreement which required that this property should be sold at public auction when it was no longer wanted, for a sum not less than $20,000. The sale was effected in 1863 for a sum of only $12,100, and the balance ($7,900) not realized by the sale was paid as agreed on.
The former "Old Château St. Louis."	......	......	......	......	......	......	It was constructed by the French Government; the foundation was laid out by Champlain, on the 1st May, 1664, and the masonry was commenced five days afterwards. Cost not ascertained. A 2nd story was added between the years 1690 and 1698, and a 3rd story in 1809. The whole building was destroyed by fire on the 23rd February, 1834.
do construction of a 3rd story.	40,000 00	......	40,000 00	......	40,000 00	253	
The present "Old Château St. Louis," see "Laval, Normal and Model Schools, Quebec.	......	......	......	......	......	253	Built from 1800 to 1809. Cost not ascertained. It was repaired in 1851-2-3-4, at a cost of $13,718.42, and was placed under the care of the Corporation of Quebec, from 1851 to 1856. In 1857 it was fitted up for the use of the Quebec Normal and Model Schools.
Durham Terrace, on foundation of former "Old Château St. Louis."	......	12,444 30	12,444 30	......	12,444 30	253	This expenditure was incurred in 1854-55 to improve Durham Terrace and adjoining grounds; in addition to this a sum of $3,952.23 was spent from 1853 to 1856 for repairs to the Old Château Garden Walls.
Governor General's temporary residence, St. Louis Street.	......	48,855 82	48,855 82	......	48,855 82	......	This amount was expended in 1862 to fit up the building in question as a temporary residence for His Excellence, prior to the reconstruction of his former residence destroyed by fire at Spencer Wood.
Carried over......	107,370 76	525,159 24	632,530 00	60,000 00	692,530 00		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*							
LOWER CANADA.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
GOVERNMENT HOUSES.—*Continued.*							
Brought over	107,370 76	525,159 24	632,530 00	60,000 00	692,530 00		
MONTREAL—Old Government House	....	....	....	....	....	254	It was constructed about 1705, by M. De Ramezay, Governor of Montreal, under the French. Cost not ascertained.
do (see Jacques Cartier Normal and Model Schools. See also Purchase of land in "Miscellaneous," at end of the list of Buildings, L. C.)	....	14,395 40	14,395 40	....	14,395 40	....	The sum stated was expended in 1847-48 on the construction of a brick wing, &c., for the use of the Public Departments. A further outlay of $5,416.80 was made in 1856-7 to fit up the building for the present Educational Department.
MONKLANDS	....	41,643 28	41,643 28	....	41,643 28	255	This property was leased in 1844 for the residence of the Governor General. The sum stated was expended for the construction of a new wing, barracks, &c.
—							
PROVINCIAL OBSERVATORY.							
QUEBEC OBSERVATORY	....	12,132 45	12,132 45	....	12,132 45	257	It is situated within the citadel of Cape Diamond

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							and was constructed in 1854-5 for the sum stated. In connection with it there is another building, situated on the Bonner Property, which consists of a small tower, &c.
CUSTOM HOUSES.							
Seven Islands Custom House	....	....	....	....	....	259	Situated at the Bay of Seven Islands, 330 miles below Quebec. A sum of $241.33 was expended in 1864 to repair the roof, floors, windows, &c.
Quebec Old Custom House....	26,575 83	....	26,575 83	....	26,575 83	259	Was erected in 1831. The sum stated was expended from 1830 to 1835.—See "Return of annual expenditure and revenue for Lower and Upper Canada," before the Union, dated 1847, at page 15. This building in now occupied as the Immigration Office. The following grants were made for this Custom House, viz: In 1830, by the Act 10-11 Geo. IV, cap. 33, $24,000 for its erection; in 1832, by the Act 2 Will. IV, cap. 45, $5,400 for its completion.—See Appendix No. 27, at page 322.
Quebec New Custom House....	....	268,008 50	268,008 50	....	297,955 93	259	Commenced in 1856 and completed in 1860. The interior portion of the building was destroyed by fire on the 10th September, 1864, and was restored in 1865-6; the cost of restoration was partly covered by insurance to an amount of $24,000. The total cost of the building comprises $32,000 paid for the site in 1855, and $11,728.93 for fitting up, &c., &c.
do do rebuilt..	....	29,947 43	29,947 43	....		260	
Montreal do	18,000 00	....	18,000 00	....	18,000 00	260	Commenced in 1836 and completed in 1838. The sum entered was appropriated for its erection by 6 Wm. IV, cap. 11 (1836).—See Appendix No. 27, page 323.
St. Regis do	....	1,457 00	1,457 00	....	1,457 00	260	It was erected in 1854 on one of the Indian reservations, for which a yearly rent of $15 is payable from 18th Sept., 1854, to the Indian Department.—See Appendix No. 27, at page 322.
Dundee do	....	1,400 00	1,400 00	....	1,400 00	260	Built in 1846-7. The sum stated includes $400 for the price of the lot on which the building stands; this site was purchased by the Hon. P. McGill on 15th March, 1857.
Carried over..............	151,946 59	894,143 30	1,046,089 89	60,000 00	1,106,089 89		

APPENDIX No. 76.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
LOWER CANADA.—*Continued.*							
Brought over.	151,946 59	894,143 30	1,046,089 89	60,000 00	1,106,089 89	....	
POST OFFICES.							
QUEBEC OLD POST OFFICE... ..	....	16,000 00	16,000 00	....	16,000 00	262	This building was purchased on 6th Sept., 1853, from George Alford, for the sum stated. It is occupied by the Post Office since 1815.—See Appendix No. 27, page 322.
MONTREAL do	....	42,938 18	42,938 18	....	67,871 56	263	It was constructed from 1853 to 1855 for the sum stated. A further sum of $3,037.97 was spent in 1858 and 1860 for improvements and repairs. The land upon which this edifice is built was purchased, in 1852 and 1853 from the Seminary of St. Sulpice and others, for a sum of $24,933.38. For details of purchase—see Appendix No. 27, page 323.
do do purchase of site.	....	24,933 38	24,933 38	....			
HOSPITALS AND ASYLUMS.							
Quarantine, Health Officers, Board of Health, Vaccination Hospitals and other charitable institutions.	739,699 27	....	739,699 27	....	739,699 27	....	This sum was expended by the Government of Lower Canada, from 1793 to 1841. For details, see "Return of annual expenditure for Lower Canada," before the Union, dated 1847, at page 16.
Grosse Ile Quarantine Station..	....	129,381 48	129,381 48	....	129,381 48	264	Established in 1832. A further sum of $32,902.85 was expended on account of Immigration and Quarantine Service, from 1st January, 1851, to 1st July,

							1867. An appropriation to purchase the Island was provided for by the Act 6 Wm. IV, cap. 21 (1836); the sum was to be fixed by arbitrators, and has not been ascertained. See Appendix No. 27, page 324.
Immigrant Shed, Quebec........	....	900 00	900 00	....	900 00	266	Constructed in 1863, on the wharf at rear of Old Custom House. The sum entered is the amount of the Contract for the construction of the building.
Marine Hospital, Quebec— Central portion and W. wing.	57,857 14	....	60,000 00	....	155,724 00	266	The Central portion and West wing were commenced in 1832 and completed in 1834. The sum stated is shewn in the "Return of annual expenditure for L. C.," before the Union, dated 1847, at page 15. For Acts granting moneys to erect this building, see Appendix No. 27, page 322. A further sum of $2,142.86 was spent as shown in Appendix No. 23, at page 266. The East wing was constructed in 1854-55-56. A sum of $37.077 was expended from 1856 to 1858, to reconstruct wharves, floating platform, &c. The Cholera Hospital was commenced in 1858 and completed in 1866. In addition to the sums entered, a further outlay of $14,187.50 was made since the Union, on repairs. The total amount expended by the Department of Public Works, since the Union, inclusive of the latter sum for repairs, amounts to $109,911.50 on the whole establishment. See Appendix No. 1, page 4.
do do	2,142 86	....					
Construction of E. wing........	....	50,647 00	50,647 00	....			
do wharves	....	37,077 00	37,077 00	....			
do Cholera Hospital.	....	8,000 00	8,000 00	....			
Temporary Lunatic Asylum.... (Supp'd to have been in Quebec)	7,200 00	....	7,200 00	....	7,200 00	....	This sum was expended in 1839. See "Return of annual expenditure for L. C.," dated 1847, at page 15.
Lunatic Asylum, At Côte St. Antoine } Montreal	(Not yet erec	ted)	....	....	....	323	Site purchased in 1861, at a yearly ground rent of £2 19s. 8d., up to 1893, and thence for ever, £19 17s. 2d. yearly. See Appendice No. 27, page 323.
Old Immigrant Sheds, Montreal	....	66,396 25	66,396 25	....	66,396 25	266	They were built partly in 1847 and partly before that year, and are situated on the South side of Basin No. 2, Lachine Canal, between Wellington Street and Point St. Charles. The land on which these buildings stand, contains 55 arpents and 51 perches, superficial, and was purchased in 1853, for a sum of $97,020, which is included in the cost of Lachine Canal, the above land being reserved for canal purposes. Most of these buildings were erected in 1841, at Point St. Charles, near the North-western terminus of the Victoria Railway Bridge. The land on which they stand (34 superficial arpents), together with the buildings erected thereon, was purchased in 1853 for the sum of $54,000. The Immigrant sheds and land were sold to the Grand Trunk Railway Company, in 1862. The sum mentioned in this Statement is for the erection of the Immigrant sheds constructed in 1847. All other buildings erected before that period were purchased with the land, the cost of which comprises that of the buildings in question.
New Immigrant Sheds, do	....						
Carried over...............	958,845 86	1,270,416 59	2,229,262 45	60,000 00	2,289,262 45		

APPENDIX No, 70.—*Continued.*

STAETMENT showing: 1st, The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
LOWER CANADA.—*Continued.*							
Brought over	958,845 86	1,270,416 59	2,229,262 45	60,000 00	2,289,262 45		
COURT HOUSES.							
Old District Court House, Quebec.	120,000 00	....	120,000 00	....	120,000 00	268	It was constructed from 1796 to 1804, for the sum stated. An appropriation for its improvement was provided by the Act 55 Geo. III, cap. 9, in 1815. See Appendix No. 27, page 322. Since the Union, the sum spent under the Department of Public Works on repairs and improvements to this building amounts to $46,033.92, including some repairs on the Old Jail, in 1856 57, and the sum of $2,673.47, shown in Appendix No. 1, page 4.
District Court House, Three-Rivers.	45,605 65	....	45,605 65	....	45,605 65	268-273	The following grants were made for this Court House, viz: 57 Geo. III, cap. 17 (1817), appropriation of $32,000 to purchase site and erect building; and 1 Geo. IV, cap. 14 (1821), a further sum of $13,605.65 to complete it. See Appendix No. 27, page 326. It was built about 1817. It has been kept in repair since the Union, and has been improved by the addition of a portico, which was completed in 1866. The amount expended by the Departm'nt of Public Works on this Court House is $2,466.97, from 1841 to 1849, and $4,131;19 from 1858 to 30th June, 1867, including repairs on Old Jail, as shown by Reports of Public Works, since the Union.

Sherbrooke Court House, District of St. Francis.	13,200 00	....	13,200 00	....	13,200 00	269	This sum was granted in 1839, to purchase site and to erect this building, by 2 Vic., cap. 38.—see Appendix No. 27, page 326. A sum of $10,594.43 was expended since the Union, for improvements and repairs, up to 1st July, 1867; $2,880, through Inspector General, for repairs; $4,099.53, through Department of Public Works, for introduction of Prowse's heating apparatus, and $3,614.90, for repairs, under the same Department. See Appendix N, pages 80 and 81, Public Works Report for 1848, &c.
Old District Court House, Montreal.	20,000 00	....	20,000 00	....	20,000 00	269	The Old Court House of Montreal was built in the year 1800, under Provincial Statute passed the 3rd of June, 1799, by which a sum of $20,000 was granted for its erection. The amount expended under the Department of Public Works on this structure, from the Union to the time it was destroyed by fire, 18th July, 1844, is $2,428.10, and $1,532.43, after the fire, in 1850.
New District Court House, Montreal.	....	308,083 57	308,083 57	....	308,083 57	269	It was erected from 1851 to 1857. In addition to the sum stated, $30,591.83 was expended on extraordinary repairs, up to 1st July, 1867. See Appendix No. 1, page 4. The expense of building this Court House was not taken from the Consolidated Revenue Fund, but was provided by the Act 12 Vic., cap. 112, of 1849, from Fees on Court proceedings, and by the Act 13, 14 Vic., cap. 94, of 1850, from licences on taverns and houses of public entertainment in the City of Montreal. See Appendix No. 27, page 326.
County Court Houses erected under Act 20 Vic., Cap. 44 (43 in number).	....	37,077 20	37,077 20	....	37,077 20	271	For a list of these Court Houses, and the amount paid and still due thereon,—see Appendix No. 23, pages 270 and 271. The various grants therein entered, were made by the Government to each Municipality, according to cap. 110 of the Consolidated Statutes of L. C.—see also Appendix No. 27, page 327. The Act 20 Vic., cap. 44, of 1857, sec. 113, establishes a Fund called: "*The Building and Jury Fund,*" for repairing Court Houses and Jails, and paying Petit Jurors in criminal cases, consisting of: 1° Police fines; 2° Summary conviction fines, under 4 and 5 Vic., caps. 26 and 27, of 1841; 3° Fines under the Public Worship Act of L. C., 7 Geo. IV, cap. 3, of 1827; 4° Percentage on moneys levied in execution in any civil case; 5° Fines under juvenile offenders Act, 20 Vic., cap. 29, of 1857; 6° Fines for contempt of Court or for non attendance of Jurors or witnesses, &c.; and 7° A yearly contribution of £12 from the local municipality in which the Court House and Jail is situated, of £6 from each of the other local municipalities within the County, and £3 from each other local municipality in the District.
Carried over......	1,157,651 51	1,615,577 36	2,773,228 87	60,000 00	2,833,228 87		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
LOWER CANADA.—*Continued.*							
Brought over............	1,157,651 51	1,615,577 36	2,773,223 87	60,000 00	2,833,228 87		
JAILS AND PRISONS.							
Old District Jail, Quebec.........	60,000 00	....	60,000 00	....	60,000 00	272	It was erected in 1810 for the sum stated, and first occupied in 1814; the outlay on this Jail for repairs, &c., since the Union, amounts to $6,087.56, exclusive of some expenditure charged to the Court House in 1856 and 1857, and included in the sum stated for the repairs of the building. The old Jail was sold in 1861, for $12,000, to the Trustees of "Morrin College."
New District Jail, do .... For cost of Bonner property, portion of which is occup'd by this Jail.—See "Miscellaneous" at end of list of Public Buildings for L. C.	....	137,932 12	137,932 12	....	137,932 12	272	It was constructed from 1861 to 1867, and handed over to the Sheriff on the 1st June, 1867. The sum stated includes $17,364.55, awarded in 1865 on claim of Murphy, Quigley *et al.*, contractors—but it does not embrace the cost of the Bonner Property, of which it occupies only a portion. The cost of the property was $18,500.
District Jail, Three Rivers......	9,372 00	....	9,372 00	....	9,372 00	273	By the Act 51st Geo. III, cap. 17 (1811) $1,600 were granted to purchase site, and $7,772 for the construction of the building. See Appendix No. 27, page 326. It was erected towards 1817, and has been repaired by this Department since the time of the Union. The total sum expended on repairs and improvements to the Jail and Court House, up to 1st July, 1867, is $4,131.19, as already stated.

Sherbrooke Old Jail, District of St. Francis.	8,000 00	………………	8,000 00	………………	8,000 00	273	A sum of $8,000 was granted to erect the old Jail by 4 Geo. IV, cap. 3, (1824). See Appendix No. 27, page 326. The principal expenditure by the Department of Public Works on this building, was that of $2,518 for repairs, &c., from 1841 to 1849. See Appendix N, pages 81, 82, Report of Public Works for 1848.
Sherbrooke New Jail, do …	………………	24,279 79	24,279 79	………………	24,279 79	273	This building was commenced in 1865, and the portion contracted for was not completed up to 1st July, 1867. The contract price is $24,977 for the main portion of the edifice; one wing yet remains to be placed under contract. A grant of $60,000 for the construction of the new Jail was made by the Act 29 Vic., cap. 2, in 1865. See Appendix No. 27, page 326.
Old District Jail, Montreal …..	36,000 00	………………	36,000 00	………………	36,000 00	274	It was erected in 1806 and was demolished about 1850, to clear the site for the new Court House. The sum stated was appropriated in 1805 by an Act of Parliament of Lower Canada. An additional sum of $4,825.40 was expended on this building from the time of Union up to the time it was demolished about 1849. See Appendix N, pages 80, 81, Report of Public Works for 1848.
New District Jail, do ……	104,000 00	15,000 00	119,000 00	………………	119,000 00	274	A sum of $80,000 was granted for the New Jail by 10-11 Geo. IV, cap. 31 (1830), and by Wm. IV, cap. 14 (1834); a further sum of $6,369 22 was appropriated towards its completion. See Appendix No. 27, page 326. It was constructed from 1830 to 1840 for the sum stated. The expenditure since the Union up to the 1st July, 1867, for improvements and repairs, under the Department, amounts to $22,354.07, of which $15,000 were spent on widening the North East wing in 1852-53.
Reformatory Prison, St. Vincent de Paul.	………………	18,600 77	18,600 77	………………	89,551 73	275	This building was formerly occupied by the Nuns of the Sacred Heart. It was purchased by the Government from "La Fabrique de St. Vincent de Paul," in 1861, for a sum of $18,000, which is included in the sum here entered; this prison was destroyed by fire on the 7th August 1864.
do being reconstructed.	………………	70,950 96	70,950 96	………………		275	Reconstruction begun in 1865 and not yet completed. The expenditure stated is up to 1st July, 1867, in addition to which a further sum of $63,000 is estimated for the completion of the Prison, according to the design adopted.
House of Correction, Quebec…..	40,718 50	………………	40,718 50	………………	40,718 50	………………	This expenditure was made from 1801 to 1841. See "Return of annual expenditure for L. C.," before the Union, dated 1847, at page 15.
House of Industry, do …..	1,800 00	………………	1,800 00	………………	1,800 00	………………	Expended in 1825. See do do
Carried over…………	1,417,542 01	1,882,341 00	3,299,883 01	60,000 00	3,359,883 01		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*							
LOWER CANADA.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
COURT HOUSES AND JAILS.—*Combined.*							
Brought over	1,417,542 01	1,882,341 00	3,299,883 01	60,000 00	3,359,883 01		
Court House and Jail, Percé, County of Gaspé.	4,000 00	....	4,000 00	....	4,000 00	276	In 1808, a grant to erect this building was made by the Act 48 Geo. III, cap. 35. It was erected in 1814. A sum of $113 12 was expended in 1863 for repairs.
Court House and Jail. New Carlisle, County of Bonaventure, in the District of Gaspé.	16,400 00	....	16,400 00	....	16,400 00	275	A sum of $4,000 was granted for the construction of this building in 1808, by the Act 48 Geo. III, cap. 35. Another grant of $4,000, to continue the work, was made in 1814, by the Act Geo. III, cap. 9, and in 1821 a further sum was appropriated for its completion, by the Act 1 Geo. IV, c. 20. See App. No. 27, p. 326 where Percé is inserted for New Carlisle and *vice versâ*. In 1860, the Department expended a sum of $34385 for repairs.
District Court House and Jail, Kamouraska.	....	20,598 32	20,598 32	....	28,428 32	276	Was purchased on the 31st May, 1850, under the Act 12 Vic., cap. 38, of 30th May, 1849, from J. G. Taché, son of the late Hon. J. B. Taché, for a sum of $6,000. It was converted into a Jail and Court House in 1850-51, at a cost of $2,858 40. A further outlay of $11,739 92 was made, from 1859 to 1861, for the construction of a wing of stone masonry. The building was partially destroyed by fire on the 9th Dec., 1862, and rebuilt from 1863 to 1866, for a sum of $7,830, exclusive of $631 01 in 1866-67 for repairs. The total outlay up to 1st July

do wing restored...	....	7,830 00	7,830 00	....			1867, amounts to $29,059.33 on old and new works. The ruins of the old building were removed and the wing restored from 1863 to 1865 for the sum stated.
Old District Court House and Jail, St. Hyacinthe, destroyed by fire.	....	....	....	....	....	276	The amount expended under the Department for repairs, from 1841 to 23rd August, 1860, (when it was destroyed by fire) was $2,670 93.
District Court House and Jail, Aylmer, District of Ottawa...	....	25,943 52	25,943 52	....	25,943 52	277	It was erected from 1850 to 1854. The expenditure was provided for by loan, on debentures issued under authority of 12 Vic., cap. 112, the interest and principal of which are chargeable upon a duty or tax upon all proceedings in the Court at Aylmer. The sum entered includes the cost of enclosure walls and furniture. Site purchased 6th October, 1849, from Ruggles Wright, for the sum of $800, which is included in the $25,943.52 See Appendix 27, page 326.
New District Court Houses & Jails, erected under the Acts 20 Vic., c. 44, & 22 Vic., c. 5, viz :							
Amherst Island Court House and Jail, Magdalen Islands, Dstrict of Gaspé.	....	10,184 71	10,184 71	....	10,184 71	279	Commenced in 1861, and completed in September, 1862. The sum stated includes $240.20 for the fitting up of the building. Site transferred to Government on 4th September, 1861.
Rimouski Court House and Jail, District of Rimouski.	....	33,434 41	33,434 41	....	33,434 41	279	Commenced in 1859, and completed in September, 1862. In the sum stated is included $882.73, for the fitting up of the building. Site transferred to Government on the 1st October, 1859.
Chicoutimi Court House and Jail, District of Chicoutimi.	....	30,423 90	30,423 90	....	30,423 90	279	Commenced in 1859, and completed in March, 1862. Site transferred to Government on the 2nd March, 1860. The sum stated includes $736.89 for the fitting up of the building. $3,000 were granted towards its construction by 16 Vic., cap. 156 (1852).
Malbaie Court House and Jail, District of Saguenay.	....	42,423 56	42,423 56	....	42,423 56	279	Commenced in 1859, and completed in November, 1863. The sum stated includes $1,483.29 for the fitting up of the building. Site transferred to Government on the 26th March, 1859.
St. Thomas Court House and Jail, District of Montmagny.	....	34,323 46	34,323 46	....	34,323 46	279	Commenced in 1859, and completed in July, 1862. The sum stated includes $854.13 for the fitting up of the building. Site transferred to Government on the 14th November, 1857.
St. Joseph de le Beauce Court House and Jail, District of Beauce.	....	28,671 32	28,671 32	....	28,671 32	279	Commenced in 1859, and completed in September, 1852. Site transferred to Government on 16th February, 1860. The sum stated includes $861.06 for the fitting up of the building.
St. Christophe d'Arthabaska, Court House and Jail, District of Arthabaska.	....	31,482 60	31,482 60	....	31,482 60	279	Site transferred to Government on the 5th February, 1859. Building commenced in 1859 and completed in December, 1861. The sum stated includes $1,491.63 for the fitting up of the building.
Carried over............	1,437,942 01	2,147,656 80	3,585,598 81	60,000 00	3,645,598 81		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*							
Lower Canada.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
COURT HOUSES AND JAILS—*Continued.*							
Brought over.........	1,437,942 01	2,147,656 80	3,585,598 81	60,000 00	3,645,598 81		
Sorel Court House and Jail, District of Richelieu.	....	28,796 06	28,796 06	....	28,796 06	279	Commenced in 1860 and completed in January, 1862. The sum stated includes $1,264.91 for the fitting up of the building.
Nelsonville (Sweetsburgh) District of Bedford.	....	27,280 04	27,280 04	....	27,280 04	279	Site transferred to Government on the 15th May, 1858. Building commenced in 1859 and completed in 1862. The sum stated includes $939.55 for the fitting up of the building.
St. Hyacinthe Court House and Jail, District of St. Hyacinthe.	....	34,984 83	34,984 83	....	34,984 83	279	Site transferred to Government on the 7th August, 1860. Building commenced in 1860 and completed in 1862. The sum stated includes $897.80 for the fitting up of the building.
Industrie Court House and Jail, District of Joliette.	....	32,146 65	32,146 65	....	32,146 65	279	Site transferred to Government on the 13th June, 1860. Building commenced in 1860 and completed in 1862. The sum stated includes $849.38 for the fitting up of the building.
St. John Court House and Jail, District of Iberville.	....	26,883 46	26,883 46	....	26,883 46	279	Site transferred to Government on the 27th December, 1860. Building commenced in 1859 and completed in 1860. The sum entered includes $789.57 for the fitting up of the building.

St. Clement Court House and Jail, District of Beauharnois.	....	31,231 57	31,231 57	....	31,231 57	279	Site transferred to Government on the 17th February, 1859. Building commenced in 1859 and completed in 1862. The sum stated includes $808.95 for the fitting up of the building.
Ste. Scholastique Court House and Jail, District of Terrebonne.	....	29,812 03	29,812 03	....	45,373 25	279	Commenced in 1859 and completed in 1862. It was burnt in 1865. The sum stated includes $1,338.32 for the fitting up of the building.
do rebuilt	....	15,561 22	15,561 22	....		279	It was reconstructed in 1866-7.
General expenditure on Court Houses and Jails, before the Union.	33,870 17	....	33,870 17	....	33,870 17	....	According to the "Return of annual expenditure for Lower Canada" before the Union, dated 1847, (page 15) the expenditure on Court Houses and Jails, from 1799 to 1841, amounts to $450,047.82, from which sum must be deducted $416,177.65 which is the amount already entered in this statement for expenditure, prior to Union, on the Court Houses and Jails at Quebec, Montreal, Sherbrooke and Three Rivers.
NORMAL SCHOOLS.							
Laval Normal and Model Schools, Quebec.	....	7,181 06	7,181 06	....	7,181 06	....	This was the outlay incurred in 1857-58-59 in fitting up the Old Château St. Louis for the use of these schools.
Jacques-Cartier Normal and Model Schools, Montreal.	....	5,416 80	5,416 80	....	5,416 80	....	See "Old Government House," at page 520.
McGill Normal and Model Schools, formerly the High School, Montreal.	....	18,000 00	18,000 00	....	18,000 00	280	It was purchased in 1852 for the sum stated. An additional outlay of $10,516.00 was made to repair and fit up the building so as to convert it into a Normal and Model School for the Protestants of Lower Canada.
Do alterations and fitting up.	....	10,516 00	10,516 00	....	10,516 00	....	It was opened for instruction on the 3rd March, 1857.
DRILL SHEDS, GUN SHEDS AND BARRACKS.							
Quebec Drill Shed	....	8,453 21	8,453 21	....	8,453 21	280	It was constructed in 1863-64 for the sum stated, on a lot of ground which was ceded to the Province by the Imperial Government, outside of Louis Gate.
do Armory and Gun Shed.	....	4,406 11	4,406 11	....	4,406 11	281	It was constructed in 1856 and improved in 1857 for the sum stated. This gun shed stands in the rear of the property known formerly as the "Sewell Property," near Louis Gate, opposite the Esplanade.
Water Street Barracks, Montreal.	....	1,421 13	1,421 13	....	1,421 13	281	This is only expenditure made by the Provincial Government on this building. It was incurred in 1850-51. In the time of the French, this property belonged to a nunnery. It is situated at the entrance of Quebec Suburbs.
Cavalry Barracks, do ...	....	....	....	....	....	281	They were repaired in 1850-51, at an outlay of $2,701.88
Carried over................	1,471,812 18	2,429,746 97	3,901,559 15	60,000 00	3,961,559 15		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government. Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
LOWER CANADA.—*Concluded.*							
Brought over.....	1,471,812 18	2,429,746 97	3,901,559 15	60,000 00	3,961,559 15		
MISCELLANEOUS BUILDINGS.							
Sewell Property, Quebec.........	....	20,757 65	20,757 65	....	20,757 65	282	It was purchased on the 11 Nov., 1854, for $20,000 from W. S. Sewell *et al.*, for a Nautical School. In 1854-5-6, $1,799.62 were expended for repairs on this building, which is at present occupied by Sir N. F. Belleau, Lieutenant Governor, and the Executive of the Province of Quebec.
Water Police Station, Quebec...	....	1,073 50	1,073 50	....	1,073 50	282	It was purchased in 1852 for $600—and was fitted up for the use of the Water Police, at a cost of $473.50.
Geological Museum, Montréal..	....	20,000 00	20,000 00	....	23,972 23	282	It was purchased from the Hon. P. McGill on 25th Feb., 1847, for the sum stated. In 1853-4-5, it was altered, repaired and improved at a cost of $3,972.23.
Do alterations and fitting up.	....	3,972 23	3,972 23	....			
Buildings at the corner of Notre-Dame street and Jacques Cartier Square, Montreal.	....	25,280 00	25,280 00	....	25,280 00	283	The lot at the North-East corner of Notre-Dame Street and Jacques-Cartier Square was purchased on the 12th July, 1849, for the sum of $16,000, and that on Jacques-Cartier Square, on the 13th October, 1858,

							for $9,280. The buildings erected at the corner of Notre-Dame street are now used by the military engineers engaged on the fortifications of Montreal; the other property is occupied by the Montreal police force. See Appendix No. 27, page 323, for further details respecting purchase.
Laprairie Banal Mill......	....	6,830 60	6,830 60	....	6,830 60	283	This Mill is under the control of the Crown Lands Department, and was improved in 1848 and 1849, at the cost stated.
" New Market Hall," Quebec ..	3,600 00	....	3,600 00	....	3,600 00	....	It was erected in 1831 for the sum stated.—See " Return of annual expenditure of Lower Canada," before the Union, dated 1847, at page 15.
Removal of old " City Walls," Montreal.	8,140 00	....	8,140 00	....	8,140 00	....	They were removed from 1802 to 1818 at the cost stated.—See above " Return," at page 13.
Land, &c., purchased near Old Government House, Montreal	....	5,500 00	5,500 00	....	5,500 00	255	This was purchased from C. S. Rodier, on 12th December, 1866. See Appendix No. 27, page 323. The total cost of the property purchased in the neighborhood of the "Old Government House" at Montreal, is as follows, viz:— At corner of Notre-Dame Street and Jacques-Cartier Square, from F. W. & H. Desrivières, July 12, 1849, as above.... $16,000 00 On Jacques-Cartier Square, from Royal Institution for advancement of learnings, Oct. 13, 1858, as above. .... 9,280 00 Parcel of land at rear of Government House, from C. S. Rodier, Dec. 12, 1866.. 5,500 00 $30,780 00 See page 323, Appendix No. 27.
Bonner Property,—portion of which is occupied by the New Jail, Quebec.	....	18,500 00	18,500 00	....	18,500 00	272	For details respecting this property—See Appendix No. 27, page 325.
Cove Spencerwood..................	....	1,600 00	1,600 00	....	1,600 00	....	This property was purchased from Henry Atkinson, Esq., on the 24th May, 1854, for the sum stated.—See Appendix No. 27, at page 322.
Total, Public Buildings, Lower Canada..............................$	1,483,552 18	2,533,260 95	4,016,813 13	60,000 00	4,076,813 13		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
PUBLIC BUILDINGS. UPPER CANADA. HOUSES OF PARLIAMENT	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
OTTAWA— Parliament and Departmental Buildings.	....	2,723,981 68	2,723,981 68	....	2,723,981 68	249	Constructed from 1859 to 1865. They consist of three detached structures situated on the South side of the Ottawa River, on "Barrack Hill." Parliament assembled, for the first time, on the 8th June, 1866. The sum entered comprises the following, viz:— For construction and awards to Contractors ....$ 2,363,531 67 Fitting up and furniture................. 132,221 57 Electric bells and batteries .... 5,288 31 Superintendence, awards to Architects, and arbitrations . .. . 222,940 13 Total to 1st July, 1867.... ..$ 2,723,981 68
KINGSTON— Hospital, used as a Parliament House.	12,000 00	....	12,000 00	....	16,674 00	250	Constructed in 1835. By Wm. IV, cap. 28 (1832), the sum stated was appropriated for the erection of the building. Another sum of $2,000 was appropriated in aid of Hospital, by 7 Wm. IV, cap. 98 (1837). See Appendix No. 27, page 324. This Hospital was converted into a Parliament House in 1841, at the cost stated. The first session of the
do converted into a Parliament House.	....	4,674 00	4,674 00	....			

							United Parliament of Lower and Upper Canada, was opened in this building, on the 13th of June of the same year (1841). Instead of rental, a sum of $2,000 had to be paid yearly, by the Government, during their occupation of the premises, in 1841-2-3, for the support of the indigent sick of the city of Kingston.
Toronto— Old Parliament House.........	20,000 09	....	20,000 00	....	264,315 55	251	This is the cost of the building as shown by a Return made to the Legislative Assembly, on the 12th July, 1847. This structure was destroyed by fire on 30th December, 1824.
do rebuilt....	....	244,315 55	244,315 55	....			This expenditure was incurred from 1849 to 1858, and includes the amount expended within the same period, on the Government House, for which no separate account has been obtained.
Public Offices	27,980 33	....	27,980 33	....	27,980 33	....	According to a "Return of annual expenditure and revenue for Lower and Upper Canada," before Union, dated 1847 (page 27) the cost of the Parliament Buildings and Public Offices, from 1823 to 1841, amounted to $47,980.33, from which sum must be deducted $20,000 already entered as the cost of the Parliament House, prior to the Union.
GOVERNMENT HOUSES.							
Ottawa— Rideau Hall..............	....	80,819 66	80,819 66	....	80,819 66	256	This property was leased on the 2nd August, 1865, for a term of 12 years, from the heirs of the late Hon. Thomas McKay. The sum stated was expended for the enlargement of the building, &c., and the construction of a brick cottage for the residence of His Excellency's Private Secretary.
Kingston— Government House.............	....	17,600 00	17,600 00	....	17,600 00	256	This building was leased from the late Baron Grant, and was occupied as a Government House, from 1840 to 1844. The sum stated was expended for the construction of a wing of wooden frame-work and for otherwise improving the building. This wing was demolished by the proprietor after it was vacated by the Government.
Public Offices.................. ...	....	14,374 00	14,374 00	....	14,374 00	256	Rented from the late Henry Gildersleeve and occupied as Public Offices from May, 1841, to June, 1844. Expenditure incurred for the fitting up of the building and for the construction of outbuildings.
Toronto— Government House............	....	2,207 69	2,207 69	....	2,207 69	257	Main block constructed about the year 1828. Rear wings built in 1849 and 1850; the cost of which is included in that of Parliament House. The sum stated is the price of a lot on St. John Street and Simcoe Place, purchased from Geo. Ridout on the 11th July, 1856, as per Appendix No. 27, page 324.
Carried over..........	59,980 33	3,087,972 58	3,147,952 91	....	3,147,952 91		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
Upper Canada.—*Continued.* *Brought over*.........	59,980 33	3,087,972 58	3,147,952 91	....	3,147,952 91		
PROVINCIAL OBSERVATORIES.							
Toronto Magnetical and Meteorological Observatory.	....	13,851 72	13,851 72	....	13,851 72	258	The Observatory at Toronto was first established as one of the British Colonial Observatories in 1839, at the instance of the British Association for the advancement of Science and the Royal Society. It was placed by the British Government in charge of one officer and three sergeants of the Royal Artillery for a period of 14 years. At the expiration of that time, Captain (now Lieut. Col.) Lefroy, the officer then in charge, returned to England, and the Observatory was assumed by the Provincial Government, and placed in charge of a professor of University College, Toronto. See page 472, "Eighty Years Progress." Up to 1856, the observations were taken in a wooden building. The buildings used for the present Observatory are situated near the University, on the Ordnance property, which was ceded by the Imperial to the Provincial Government in 1853. They were commenced in 1854 and completed in 1856, at an outlay of $13,851.72.
Kingston Astronomical Observatory.	... .	....	....	....	Not ascertained.	....	The Astronomical Observatory, at Kingston, was established in 1855, by means of private subscriptions, and a grant from the City Corporation. It has hitherto

CUSTOMS HOUSES.							received an annual grant from the Legislature. In 1861, it was transferred by deed from the Corporation to the University of Queen's College. It contains an equatorial, a reflecting telescope, a transit and clock. See page 473, "Eighty Years Progress."
Kingston Custom House.........	....	41,805 52	41,805 52	....	41,805 52	261	Constructed from 1857 to 1859, at the cost stated, and situated at the corner of King and Clarence Streets. Cost of site not ascertained. Repairs up to July, 1867—$3,204.72.
Toronto Custom House...........	....	10,148 21	10,148 21	....	10,148 21	261	Constructed in 1845-46, for the sum stated. An appropriation for this edifice was made by the Act 8th Vic., cap. 69. It is situated in Yonge and Front Streets, a short distance from the Lake Shore. Cost of site not ascertained.
Hamilton Custom House.........	....	46,188 45	46,188 45	....	46,188 45	261	This Custom House is situated on Stuart Street. It was constructed from 1858 to 1860, at a cost of $36,259.90. The lot upon which it stands was purchased on 20th June 1855, from Messrs. Moore & McKinstry, for a sum of $8,000, under the Act 18 Vic., cap. 90. To this must be added $1,928.55 for superintendence, &c., making the total cost of the building amount to $46,188.45. A sum of $839.37 has been spent for repairs, &c., making the total outlay $47,027.82 up to 1st July 1867.
Port Dalhousie—Custom House	Not added below, being included in the cost of construct. of the Welland Canal.						
	....	11,481 43	11,481 43	....	11,481 43	262	This Custom House was established in the Village of St. Catherines, about the year 1845, in the building formerly occupied as the Welland Canal Office. In 1855, a new building was erected and has since been occupied partly as a Canal Office, and partly as a Custom House. The cost of construction here entered was paid out of one of the Welland Canal appropriations.
Rondeau Custom House..........	....	....	....	....	....	262	Is situated in the Village of Shrewsbury, and consists of a log-house, which is reported to be in a very dilapidated condition. The construction of a new building, in the Village of Rondeau, has been recommended.
POST OFFICES.							
Kingston Post Office..............	....	48,547 12	48,547 12	....	48,547 12	263	A site for this Post Office was purchased on 25th July 1853, (on lot No. 50, Princess Street) from the Commercial Bank of the Midland District for $8,900; but it is reported to have been constructed on another site at the corner of Wellington and Clarence Streets. The building was commenced in October 1856, and completed in 1859. The expenditure incurred up to 1st January 1860, when it was completed and fitted up, amounted to $39,273.95, in addition to which $373.17 were expended in 1860-61, thus making a total outlay of $39,647.12 up to 1st July 1867, exclusive of cost of site.
Carried over............	59,980 33	3,248,513 60	3,308,493 93	....	3,308,493 93	....	

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*							
UPPER CANADA.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
POST OFFICES.—*Continued.*							
Brought over.........	59,980 33	3,248,513 60	3,308,493 93	....	3,308,493 93		
Toronto Post office..................	....	32,716 07	32,716 07	....	32,716 07	263–264	The site is between Adelaide, Toronto, Yonge and King Streets; it was purchased on 2nd August 1851, from E. F. Whittemore, for a sum of $4,550; on the 27th March 1866, additional ground was acquired for the use of the Post Office from Mr. Johnston, for $100. The work was commenced in 1851, and completed in 1854, at a cost $25,399.22. A further sum of $2,666.85 was expended in 1856-57-60 for drainage, improvements and repairs. The total outlay up to 1st July, 1867, amounts to $28,066.07, exclusive of site.
Hamilton Post Office...............	....	52,629 42	52,629 42	....	52,629 42	264	The site of this Post Office comprises two parcels of land, one on James Street, purchased from E. Ritchie, on 12th August, 1853, for $8,000; the other on Rebecca Street, in 1854, from Hon. Isaac Buchanan, for $1,900. Building erected from 1854 to 1858, at a cost of $41,754.62. A further sum of $974.80 was expended in 1859, for improvements to drainage, ventilation and heating.
London Post Office..................	....	39,122 76	39,122 76	....	39,122 76	264	The site for this Post Office was purchased by the Postmaster General from Messrs. W. and J. Carling, in 1856, and the deed of sale was executed on

							4th February, 1857, for a sum of $8,640. It consists of lot No. 11 on North Street and William Street. The work was commenced in the Autumn of 1858, and completed in 1860, at a cost of $30,482.76, exclusive of the purchase of the site, but inclusive of the outlay for fitting up, &c. A sum of $1,413.30 was expended for repairs from 1862 to 1867, both years inclusive. The total outlay on this building for site, construction, improvements and repairs, up to 1st July, 1867, amounts to the sum of $40,536.06. See Appendix No. 1, page 4.
HOSPITALS AND ASYLUMS.							
Criminal Lunatic Asylum and Jail, or Rockwood Asylum, Kingston.	....	300,000 00	300,000 00	....	300,000 00	267	This building is in connection with the Provincial Penitentiary, and is situated on the North Shore of Lake Ontario, near the Village of Portsmouth, at or about ½ of a mile beyond the Penitentiary, and 1½ miles westward from the City of Kingston. The site was purchased from the heirs of the late Judge Cartwright, on the 21st of October, 1856, for a sum of $20,000; it was commenced in 1859, and was constructed chiefly by convict labor, at a cost of about $280,000, as shown on a plan furnished to the Department of Public Works, in 1867. The Asylum was first occupied in 1866. The only expenditure by the Department of Public Works, on account of this Asylum was in 1856-7-8, when a sum of $4,293.92 was paid for professional services of Architects. &c. For further details, see "Public Buildings" at end of this Appendix.
Provincial Lunatic Asylum, Toronto.	200 00	219,506 28	219,706 28	....	219,706 28	284	Established in 1839 by 2 Vic., cap. 11, and opened in 1841 in the old Jail, on Toronto Street. This building having been found too small, the Asylum was opened in larger premises at the corner of Front and Bathurst Streets. The present Asylum was commenced in 1845. The site on which it stands (50 acres) was granted to this institution by the Ordnance Department. The expenditure prior to Union, on account of this Asylum, is shown in a "Return of Annual Expenditure of Upper Canada" dated 1847, at page 29. The sum expended, since the Union, is $219,506.28. For further details, see "Public Buildings" at end of this Appendix.
Temporary Lunatic Asylum or "University Branch," Toronto.	....	10,662 13	10,662 13	....	10,662 13	268	The expenditure stated was incurred in 1856 and 1857 upon the premises known as the "Old University Buildings." In consequence of the overcrowded state of the Provincial Lunatic Asylum in Toronto, it became necessary in 1856 to provide temporary accommodation for about 80 female lunatics in the "Old University Buildings" which are to be vacated as soon as the requisite accommodation can be supplied by the extension of the Provincial Asylum.
Carried over	60,180 33	3,903,150 26	3,963,330 59	....	3,963,330 59		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
UPPER CANADA.—*Continued.*							
HOSPITALS AND ASYLUMS.—*Continued.*							
Brought over..................	60,180 33	3,903,150 26	3,963,330 59	....	3,963,330 59		
Lunatic Asylum, Orillia.........	....	34,935 07	34,935 07	See References.	34,935 07	234	Originally constructed as an Hotel and opened as an Asylum in 1860. Site and building purchased by government in 1859 for the sum of $16,800. A further sum of $18,135 07 has been expended from 1859 to 1867, for the fitting up of the building, and for alterations, improvements and repairs. "See Public Accounts" from 1859 to 1867.
Lunatic Asylum, Malden.......	....	22,938 73	22,938 73	do	22,938 73	234	Old barracks, at Amherstburgh, transferred by the Imperial to the Provincial Government under the Act 18 Vic., cap. 91, of 30th May, 1855.—They were converted into a Lunatic Asylum in 1859—This Asylum was in connection with the Provincial Lunatic Asylum up to 1861. Since that time lunatics of the Counties of Norfolk, Oxford, Middlesex, Kent, Elgin, Essex and Lambton are sent to Malden instead of Toronto—See Report of Prison Inspectors for 1861, at page 113. The sum stated includes: Fitting up of the buildings, in 1859.............. .... $ 6,569 36

							Alterations, improvements and repairs from 1859 to 1867, (no separate account having been kept for repairs)... 16,369 37 Total.............................. $22,938 73 For details of expenditure—See "*Public Accounts*" from 1859 to 1867.
Kingston Hospital.................	....	....	....	do	Expenditure Parliament	entered at House.	See remarks at Parliament House, Kingston, page 534, showing expenditure.
Hospitals and Charities of Upper Canada.	....	....	....	do	....	....	A very full and interesting report on these institutions, showing the amounts granted by Government in aid of the same, was made by Hon. John Simpson, Assistant Auditor, in 1864—see printed Report on the Municipal Loan Funds and the Hospitals and Charities of the Province of Canada, pages 49 to 77.
COURT HOUSES, JAILS AND PRISONS.							
Kingston Court House and Jail.	....	28,000 00	28,000 00	do	28,000 00	....	Lot on Church Street sold to Government by the Municipality of County of Frontenac, Lennox, and Addington, on the 11th August, 1855, for the sum of $28,000. Cost of building not ascertained.
Provincial Penitentiary, Kingston.	136,831 02	82,486 83	219,317 85	....	219,317 85	284	The cost prior to the Union is shown in a Return made to the Legislative Assembly, on the 27th July, 1847. In another Return printed by Order of the Legislative Assembly, the same year, the total expenditure (see page 26) on the Penitentiary, between the years 1831 and 1841, amounts to £44,108 15s. 7d. ($176,435.12) or $39,604.10 more than the sum here entered; but this surplus expenditure was probably for management, and other expenses of the institution.. For details of expenditure since the Union,—see "Public Buildings," at end of this Appendix.
Reformatory Prison, Penetanguishene.	....	86,819 85	86,819 85	....	86,819 85	284	Old barracks formerly belonging to Imperial Government and transferred to Provincial Government under the Act 18 Vic., cap. 91, of 30th May, 1855.—Opened in August 1859 as a Reformatory Prison. The sum stated includes: Fitting up of the building for the use of prisoners—1858-9-60....... $3,560 83. Construction of new buildings in 1861.. .... $ 4,954 83 1862................. 16,988 52 1863........ .... 15,730 11 1864................. 8,593 99 1865......... .. ... 12,904 08 1866................. 10,215 06 1867................. 13,872 43 83,259 02 Total.................. .... $86,819 85 [See Public Accounts from 1858 to 1867.]
Carried over..............	197,011 35	4,158,330 74	4,355,342 09	....	4,355,342 09		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PUBLIC BUILDINGS: *Continued.*							
Upper Canada.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
COURT HOUSES, JAILS AND PRISONS.—*Continued.*							
Brought over	197,011 35	4,158,330 74	4,355,342 09	....	4,355,342 09		
Court House and Jail, District of Algoma.	....	11,831 88	11,831 88	....	11,831 88	279	Is being erected on a lot reserved for that purpose in the town of Sault Ste. Marie, at the foot of Lake Superior, and containing about 3 acres. The first contract entered into, about 1861, was for a wooden building, under a grant of $4,000; the building was commenced in the Spring of that year, but having been condemned, it was abandoned by the contractor in 1862. A second contract for the construction of a stone building was signed on the 10th October, 1865, for $15,780. The sum entered was paid by this Department up to 1st July, 1867. The grants made by the Legislature for the erection of the building are as follows: $4,000 in 1860, $8,000 in 1863, and $8,000 in 1864-5.
Court Houses and Jails........	24,000 00	Paid out of U. C. Building Fund, from 1861 to 1st July, 1867 116,183 40	140,183 40	Not ascertained.	140,183 40	....	For details of expenditure on the Court Houses and Jails not enumerated in this Statement and a summary of Acts concerning the same. See "References—Public Buildings" at end of this Appendix.
UNIVERSITIES, COLLEGES AND NORMAL SCHOOLS.							
Schools and Colleges	80,760 33	....	80,760 33	....	80,760 33	....	From 1821, inclusive, to 10th February, 1841. See Return of 1847, before referred to, page 32.

University of Victoria College, Cobourg.		20,000 00	20,000 00		20,000 00		Erected between the years 1828 and 1832, under a Royal Charter as the "Upper Canada Academy," by the Wesleyan Methodist Church, aided by a grant of $20,000 under 4, 5 Vic., c. 34, of 1841. It was incorporated as a College and University in 1841, by the 4, 5 Vic., cap. 37. The total value of the land and buildings is estimated at $50,000.
Toronto Normal and Model Schools.		6,000 00	6,000 00		6,000 00		Opened 1st November, 1847, in Old Government House, which was fitted up in a temporary manner for that purpose, at an expenditure of $6,000. Transferred in 1849 to the Temperance Hall, Temperance Street, where it remained until November, 1852, when the new buildings were opened on site purchased from Hon. P. McGill, between Church and Victoria Streets.
do		135,000 00	135,000 00		135,000 00	280	This amount comprises the following sums, viz: under 13 and 14 Vic., c. 2, $60,000 for purchase of site and erection of buildings in 1850; under 16 Vic., c. 156, $40,000 in 1852, and $35,000 in 1857, under 20 Vic., c. 17, in all $135,000, of which $18,000 were paid for purchase of site from Hon. P. McGill, in August, 1850.
Grantham Acadamy	1,219 10		1,219 10		1,219 10		See Return dated 27th July, 1847, before referred to.
GUN SHEDS & BARRACKS.							
Gun Shed, Ottawa		515 10	515 10		515 10	281	On west side of Rideau Canal near lower entrance locks, and belonging formerly to the Ordnance Department. It was fitted up as a gun shed in 1851 for the sum entered.
Gun Sheds, Toronto		3,592 23	3,592 23		3,592 23	281	These sheds, together with a large space planked for drill purposes, are situated on Bathurst Street, upon the premises known as the "Bathurst Street Barracks." They consist of 3 separate structures of wood—were commenced in 1856, and completed in 1857, at an outlay of $3,592.23.
Toronto Barracks, New Fort						281	Transferred by Imperial to Provincial Government, under the Act 18 Vic., c. 91, of 30th May, 1855. Since the date of transfer, they have been kept in repair together with the road and footway leading thereto by the Department of Public Works, at a cost of $2,257.69, up to 1st July, 1867.
Gun Shed, Hamilton		5,510 82	5,510 82		5,510 82	282	Erected in 1857–58, at a cost of $5,510.82, including the purchase of the site on Lot 31, west side of Nelson Street. This site was purchased on 31st December, 1857, from Alf. Booker *et ux*, for a sum of $1,000, *plus* $104 of contingent expenses. See Appendix No. 27, page 323.
Carried over	302,990 78	4,456,964 17	4,759,954 95		4,759,954 95		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
PUBLIC BUILDINGS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
UPPER CANADA.—*Continued.*							
Brought over............	302,990 78	4,456,964 17	4,759,954 95	....	4,759,954 95		
MISCELLANEOUS BUILDINGS.							
Government Buildings, Toronto (See "Parliament House, page 535.)	....	424 74	424 74	....	424 74	251	A contract for the fitting of these buildings for the use of the Local Legislature of Ontario was signed on the 10th June, 1867, for the sum of $21,940. The amount here entered is up to 1st July last (1867).
Mechanics' Institute, Toronto..	....	16,000 00	16,000 00	....	16,000 00	283	Is situated on the corner of Wellington and John Streets, and was occupied formerly as the Office of the Receiver General. This building was leased to the Government in 1855, before it was finished, on condition that it should be completed at their expense; the Government having failed to do so, they afterwards allowed the sum stated, for its completion in 1860.
Osgoode Hall, Toronto..	....	....	....	....	Not ascertained.	.. ..	The only expenditure made by the Department of Public Works on account of this building was in 1858, when a sum of $159.30 was expended for repairs. A further sum of $2,000 was paid in 1864-5 through the Finance Department for repairs of a permanent character.
College Avenue Grounds, Toronto.	....	3,533 50	3,533 50	....	3,533 50	....	For the use of the Governor General. The sum stated was expended in 1856-57.

Medical College, Toronto......	....	3,099 15	3,099 15	....	3,099 15	....	This expenditure was made from 1856 to 1858 for alterations and repairs.
Old Council House, Toronto...	....	....	....	....	....	....	Cost of building not ascertained. Building was sold in 1834, for $616. See "Return" of 1847 at page 22.
Government House, Toronto. See "Govern. House," p. 535.	11,628 07	....	11,628 07	....	11,628 07	257	For improvements and repairs from 1823, inclusive, to 1841. See Return of 1847, page 25.
Elmsely Villa......................	....	....	....	....	....	....	Leased in 1850-51, for the residence of His Excellency, at $1,000 per annum. It was vacated in fall of 1851. The cost of the fitting up of this building is included in the expenditure on Parliament House, Toronto. See page 535.
Churches and Chapels, &c......	322,956 60	....	322,956 60	....	322,956 60	....	This expenditure was made by Government of Upper-Canada, from 1830 to 1841, and comprises certain allowances to clergymen and religious teachers. See page 32 of "Return" for 1847.
Brock's Monument	2,400 00	....	2,400 00	....	2,400 00	....	This expenditure was made in 1826. See "Return" of 1847, at page 29.
Public Buildings not enumerated.	21,875 84	....	21,875 84	....	21,875 84	....	This amount was expended from 1822 to 1841, for the erection and insurance of various buildings. For details—see "Return" of 1847, at page 31.
Lock up at Bruce Mines......	....	....	....	....	....	....	$400 were appropriated in 1865, but this sum does not appear to have been yet expended.
Prison, Manitoulin Island......	....	....	....	....	....	....	$5,000 appropriated in 1866-67. Not expended up to 1st July, 1867.
Asylum for the Deaf, Dumb and Blind, Hamilton. See Do. at Montreal, page 546.	....	....	....	....	....	....	A sum of $20,000 was expended in Lower and Upper Canada on account of this institution from 1853 to 1867, but no portion of this expenditure appears to be for construction. The amount appropriated in 1853 was $80,000 for both Provinces. See References respecting Asylums at end of this Appendix.
Total, Public Buildings, Upper Canada.........$	661,851 29	4,480,021 56	5,141,872 85	....	5,141,872 85		
ADDITIONAL BUILDINGS.							
LOWER CANADA,							
The Expenditure on which had not been ascertained when the list of the other Buildings was printed. See page 533.							
Customs Accommodation, Stanstead.	....	....	....	....	....	....	An appropriation of $2,000 was made for this purpose in 1866, but nothing appears to have been expended.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government. Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Appendix (No. 23) where further information in relation to the herein mentioned buildings is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
ADDITIONAL BUILDINGS.—*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
LOWER CANADA.—*Continued.*							
Reformatory Prison, Ile aux Noix.	....	12,658 18	12,658 18	....	12,658 18	....	Old barracks at Fort Lennox, formerly belonging to Imperial Government and transferred to Provincial Government under the Act 18 Vic., cap. 91, of 30th May, 1855.—Prison opened in October, 1858, and closed in 1862, when prisoners were transferred to the Reformatory Prison of St. Vincent de Paul. The sum stated was expended from 1858 to 1861, for the fitting up of the buildings, and for alterations and other improvements, as shown by Public Accounts for 1859-60-61.
Lunatic Asylum, St. John's	....	5,216 54	5,216 54	....	5,216 54	....	Opened in 1861 in Old Court House. The sum entered includes the following expenditure, viz:— For alterations and fitting up................$3,824 64 For construction of outbuildings........... 1,391 90 Total, New works...................$5,216 54 Additional for repairs.......................... 2,856 48 Total Expenditure, up to 1st July, 1867...$8,073 02 See "Public Accounts" 1861 to 1867, for details.
Asylum for the Deaf, Dumb and Blind, Montreal. See Do. at Hamilton, page 545.	....	....	....	....	....	....	A sum of $20,000 was expended in Lower and Upper Canada on account of this institution from 1853 to 1867, but no portion of this expenditure appears to be chargeable to construction. The amount appropriated

Total, Additional Buildings, Lower Canada....	....	17,874 72	17,874 72	....	17,874 72	....	in 1853 was $80,000 for both Provinces. See References respecting Asylums at end of this Appendix.
Buildings, Lower Canada, brought down from page 533.	1,483,552 18	2,533,260 95	4,016,813 13	60,000 00	4,076,813 13	....	
Total, Public Buildings, Lower Canada.	1,483,552 18	2,551,135 67	4,034,687 85	60,000 00	4,094,687 85	....	Exclusive of those constructed by Charitable Institutions or private donations. (See References.)
Total, Public Buildings, Upper Canada.	661,851 29	4,489,021 56	5,141,872 85	....	5,141,872 85	....	do do do
Total, Public Buildings, Lower and Upper Canada	2,145,403 47	7,031,157 23	9,176,560 70	60,000 00	9,236,560 70	....	For list of buildings under control of Department of Public Works, on 31st June, 1837, see Commissioner's Report, pages 119, 120.
PROVINCIAL VESSELS, &c. LOWER AND UPPER CANADA.						Page of Commissioner's Report where further information in relation to the herein mentioned vessels is to be found.	
Dredging vessels, L. C..............	21,872 43	....	21,872 43	....	21,872 43	....	From 1830, inclusive, to 1841. See page 12 of Return of Annual Revenue and Expenditure, published 1847. This sum comprises $6,000 spent for a Steam Dredge for Montreal Harbor. See Return, 27th July, 1847. The cost of the Steam dredges purchased by Government for deepening the channel in Lake St. Peter is included in the cost of that work.
Dredging vessels, U. C............	21,600 00	... .	21,600 00	....	21,600 00	....	For two vessels. The expenditure was $8,000 in 1826;—$6,000 in 1835;—and $7,600 in 1836-37. See page 28 of Return of 1847.
Doris—wooden-paddle steamer	....	22,386 67	22,386 67	....	22,386 67	... .	Purchased on 31st May, 1850, by the Trinity House Board of Quebec, for £4,600 sterling, and sold to Frs. Baby in 1855. This steamer was placed in 1853 in the service for the protection of the Canadian Fisheries in the Gulf of St. Lawrence, which was organized in 1852. She was wrecked in 1856.
La Canadienne—wooden—sailing schooner.	....	12,792 43	12,792 43	....	12,792 43	124	Built on 5th June, 1855, under the Act 18 Vic., cap. 4, of 18th December, 1854, for the protection of the Canadian Fisheries in the Gulf of St. Lawrence, upon which service she has been placed since 1855. These fisheries extend over a coast of more than 1000 miles in length. For dimensions of vessel, &c., see References at end of this Appendix.
Carried over....	43,472 43	35,179 10	73,651 53	....	73,651 53		

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st, The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total cost of Works, so far as ascertained, up to 30th June, 1867.	Page of Commissioner's Report where further information in relation to the herein mentioned vessels is to be found.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
PROVINCIAL VESSELS, &c. —*Continued.*	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
LOWER AND UPPER CANADA.—*Continued.*							
Brought over..............	43,472 43	35,179 10	78,651 53	....	78,651 53		
La Canadienne—wooden—sailing schooner.—(Continued.)	....	7,273 80	7,273 80	....	7,273 80	124	For extraordinary repairs. During a snow storm, on the night of the 24th Nov., 1861, "La Canadienne" was stranded on a sand bank, 60 yards from the North shore and about 300 yards westward of the outlet of Little Trinity River, about 270 miles below Quebec. She was got off and repaired in the summer of 1862.
Napoleon III. — iron — screw steamer.	....	....	....	....	120,000 00	121 to 124	These steamers belonged formerly to the late Frs. Baby, Esq.; they were purchased by him for the purpose of performing the tug service between Quebec and Anticosti, in accordance with a contract from Government, dated 24th August, 1855—also the mail service to the Lower Provinces under another Government contract dated 6th May, 1859—also the buoy service and trips with Pilots' apprentices and the conveyance of light house supplies, &c., on the Lower St. Lawrence, under two contracts with the Trinity House, Quebec. The five vessels were purchased by Government from Mr. Baby on 8th August, 1860, in virtue of an O. C. of 23rd August, 1859 (No. 1891), for a sum of $225,544; the sum of $158,456 in the column of expenditure from other than Government funds represents

Queen Victoria — iron — screw steamer.					120,000 00	121 to 124	the balance paid by Mr. Baby for the purchase of these steamers; the cost of each of them is marked according to figures furnished by the late contractor. The "Admiral" was sold by Government on 16th February, 1861 to Messrs. S. & C. Peters, for the sum of $1,400. The "Victoria" was chartered by Government to T. C. Duplessis for a voyage with a cargo of Canadian produce to Cuba; she sailed from Quebec on 10th September, 1866, arrived at Havana on the 24th and left that port on the 29th of the same month; on the 4th October following she foundered at sea; she was then insured for $30,000. The remainder of the vessels are still under the control of Government and have been placed under the Minister of Marine since 1st July, 1867. The outlay, from 1st July, 1866, to 1st July, 1867, on the provincial steamers and "La Canadienne," for running expenses, outfit and repairs, is $80,290. See Appendix 44, page 371. For further details respecting dates of construction, dimensions, &c., see References "Provincial Vessels," at end of this Appendix; also Appendix 24, pages 285, 286.
Lady Head — iron — screw steamer.		225,544 00	225,544 00	158,456 00	70,000 00	121 to 124	
Advance — wooden — paddle steamer.					37,000 00	121 to 124	
Admiral — wooden — paddle steamer.					37,000 00		
Gun boats—Lakes and River St. Lawrence—							
Steamer Michigan		16,787 50	16,787 50		16,787 50		The amounts entered were paid during the fiscal year ending 30th June, 1867, for the purchase of these two steamers. In addition to this expenditure, the following outlay was incurred during the same year, viz:—For charter of steamers Michigan, Rescue, Matamoras, Dionne & G. Gordon, Watertown, St. Andrew, Canada, Royal and Hercules. ....$49,579 24 For fitting up, &c., of above steamers...... 9,472 26 For repairs, &c., do ...... 1,087 60 For supplies, &c., to do ...... 25,293 08 Total outlay, exclusive of purchase....$85,432 18 (See "Public Accounts" for 1867.)
Do Rescue		21,000 00	21,000 00		21,000 00		
Total, Provincial vessels, Lower & Upper Canada.	43,472 43	305,784 40	349,256 83	158,456 00	507,712 83		As the service performed by these vessels is for the general benefit of both provinces, one half of the expenditure has been charged to each, in the summaries of this Appendix.
One half of expenditure, say for Lower Canada.	21,736 21	152,892 20	174,628 41	79,228 00	253,856 41		See preceeding remark.
One half of expenditure, say for Upper Canada.	21,736 22	152,892 20	174,628 42	79,228 00	253,856 42		See preceeding remark.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Date of construction.	REMARKS.
	Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
ADDITIONAL LIGHT HOUSES.							
(*Constructed under Trinity Boards of Quebec & Montreal.*)	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
UNDER QUEBEC TRINITY BOARD.							
East end of Anticosti, Heath Point	25,135 27	....	25,135 27	....	25,135 27	 1835	The sums entered comprise the cost of the Lighting Apparatus. The dates marked are those when each light house was first lighted, the date of construction not having been ascertained. The light house at Father Point which was burnt in 1866, was rebuilt in 1867, but is not entirely finished; its cost will amount to $2,560.
South West Point of Anticosti	33,819 80	....	33,819 80	....	33,819 80	 1831	
Pointe des Monts	21,199 17	....	21,199 17	....	21,199 17	 1830	
Green Island	11,703 24	....	11,703 24	....	11,703 24	 1809	
Red Island	....	26,936 35	26,936 35	....	26,936 35	 1848	
Biquet	....	18,636 10	18,636 10	....	18,636 10	 1844	
South Pillar	....	16,251 17	16,251 17	....	16,251 17	 1843	
St. Antoine	....	808 65	808 65	....	808 65	 1858	
Ste. Croix	....	1,042 85	1,042 85	....	1,042 85	 1842	
Portneuf, Upper Light House	....	1,171 75	1,171 75	....	1,171 75	 1842	
Do Lower do	....	1,666 30	1,666 30	....	1,666 30		
Total, Quebec Trinity Board	91,857 48	66,513 17	158,370 65	....	(*a*) 158,370 65		
UNDER MONTREAL TRINITY BOARD.							
Lotbinière	....	100 00	100 00	....	100 00	Prior to 1842	Cost approximate. First L. H. built in 1816. One L. H.
Lotbinière (Pointe Platon)	....	992 00	992 00	....	992 00	 1860	A light was established here in 1816. One L. H.
L'Islet, Richelieu	....	2,350 00	2,350 00	....	2,350 00	 1865	A light was established here in 1816. One "
Rivière du Chêne, Langlois, Pt.	....	138 00	138 00	....	133 00	 1854	A light was established here in 1844. One "
Cap Charles	....	509 00	509 00	....	509 00	 1855	.... Two "
Grondines	....	1,152 00	1,152 00	....	1,152 00	 1859	.... Two "
St. Pierre les Becquets	....	800 00	800 00	....	800 00	 1864	A light was established here in 1844. One "

Batiscan	....	1,070 00	1,070 00	....	1,070 00	....	1867	A light was established here in 1844. Two L. H.
Champlain	....	145 00	145 00	....	145 00	....	1844	One Light House.
Lower Cap de la Magdeleine	....	750 00	750 00	....	750 00	Prior to	1842	Cost approximate. Records destroyed by fire. Two L. H.
Upper Cap de la Madeleine	....	160 00	160 00	....	160 00	....	1854	A light was established here in 1843. One L. H.
Upper Cap de la Madeleine	....	790 00	790 00	....	790 00	....	1863	.... One "
Port St. Francis	....	150 00	150 00	....	150 00	Prior to	1842	Cost approximate. Records destroyed by fire. One L. H.
Port St. Francis	....	1,094 00	1,094 00	....	1,094 00	....	1865	A light was established here in 1843. One L. H.
Pointe du Lac	....	250 00	250 00	....	250 00	Prior to	1842	Cost approximate. Records destroyed by fire. One L. H.
Light vessel, L. St. Peter, No. 1.	....	6,639 00	6,639 00	....	6,639 00	....	1856	.... One L. V.
Do do No. 2	....	6,639 00	6,639 00	....	6,639 00	....	1856	A light was established here in 1816. One "
Do do No. 3	....	6,639 00	6,639 00	....	6,639 00	....	1856	A light was established here in 1828. One "
Ile aux Raisins	....	2,090 00	2,090 00	....	2,090 00	....	1867	A light was established here in 1843. One L. H.
Ile aux Raisins	....	2,760 00	2,760 00	....	2,760 00	....	1863	.... One "
Ile à la Pierre (c)	....	1,112 00	1,112 00	....	1,112 00	....	1858	.... One "
Lavaltrie	....	2,300 00	2,300 00	....	2,300 00	....	1858	A light was established here in 1831. Two "
Contrecœur	....	1,165 00	1,165 00	....	1,165 00	....	1856	A light was established here in 1838. Two "
Ile aux Prunes	....	1,500 00	1,500 00	....	1,500 00	....	1866	.... One "
Repentigny	....	500 00	500 00	....	500 00	Prior to	1842	Cost approximate. Records destroyed by fire. Two L. H.
Ile à la Bague	....	670 00	670 00	....	670 00	....	1865	A light was established here in 1831. One L. H.
Ile Ste. Thérèse	....	1,020 00	1,020 00	....	1,020 00	....	1856	.... Two "
Pointe aux Trembles	....	580 00	580 00	....	580 00	....	1860	A light was established here in 1846. One "
Pointe aux Trembles	....	940 00	940 00	....	940 00	....	1862	.... One "
Montreal Harbor	....	1,118 00	1,118 00	....	1,118 00	....	1859	A light was established here in 1830. Two "
Total, Montreal Trinity Board.$	....	46,122 00	46,122 00	....	(b) 46,122 00			
Total Expenditure under Trinity Boards, Lower Canada$	91,857 48	112,635 17	204,492 65	....	204,492 65			
Add Expenditure under Department of Public Works on light houses, Lower Canada, as shown at page 499	380,167 26	560,030 79	940,198 05	....	940,198 05			
Total, Light houses, L. Canada$	472,024 74	672,665 96	1,144,690 70	....	1,144,690 70			
Total, Light houses, Upper Canada, brought down from page 500	98,550 51	442,749 63	541,300 14	....	541,300 14			
Total, Light houses, Lower and Upper Canada $	570,575 25	1,115,415 59	1,685,990 84	....	1,685,990 84			

N.B.—The Returns of Light Houses constructed under the Trinity Boards of Quebec and Montreal were not received in time to insert them at their proper place in the list of Light Houses, at pages 498, 499.

(a) See "Return No. 2,926" of 30th March, 1868, signed by E. B. Lindsay, Clerk, Trinity House, Quebec.

(b) See "Return No. 3,007" of 4th April, 1868, signed by E. D. David, Clerk, Trinity House, Montreal.

(c) There are 2 Light Houses at Sorel, which cost nothing to the Government, as they were given over by the Richelieu Company to the Trinity House of Montreal in 1865.

APPENDIX No. 70.—*Continued*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

No. per R. Com. Rep.	WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total cost of Construction and Equipment so far as ascertained, up to 30th June, 1867.	Length in miles exclusive of the sidings and double track.	REMARKS.
		Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
	RAILWAYS.							
*	Lower and Upper Canada.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
2	Grand Trunk...............	....	A15,142,633 34	15,142,633 34	69,092,764 66	84,235,398 00	905 50	This expenditure is up to 31st Dec., 1866, and is inclusive of $6,346,133.33 paid to Peto & Co., for construction of Victoria Bridge, but exclusive of Subsidiary Lines under the control of the Grand Trunk—exclusive also of $10,464,760.19 Interest accrued up to 1st July, 1867, on Government Loan. For details respecting apportionment of Loan, and amounts paid to contractors on the various sections of the railway—See References to Railways at end of this Appendix.
9	Montreal and Champlain... ..	....	....	....	2,417,688 00	2,417,688 00	83.00	Subsidiary line under the control of the Grand Trunk Railway Company.
4	Buffalo and Lake Huron......	....	....	....	D 8,000,780 00	8,000,780 00	160.00	do do do
	Total—Grand Trunk and Subsidiary Lines in Canada.	....	15,142,633 34	15,142,633 34	79,511,232 66	94,653,866 00	1148.50	This does not include the Subsidiary Lines under the control of the Grand Trunk, in the United States, viz:—

	Miles.	Cost of construction and equipment.
Atlantic and St. Lawrence	166	$5,978,900
Port Huron and Detroit........	62	2,169,736
Total in United States...	228	8,148,636
Add total in Canada.............	1148½	94,653,866
Total under Grand Trunk—United States and Canada	1376½	$102,802,502

*								
1	Great Western		B. 2,810,500 00	2,810,500 00	21,966,930 00	24,777,430 00	363.25	This expenditure is up to 31st January, 1867, and is exclusive of $1,130,747.50 Interest accrued up to 1st July, 1867, on Government Loan. The length includes 11 miles of railway from Preston to Berlin which do not appear to be in use.
3	Northern		C. 2,311,666 67	2,311,666 67	3,146,122 33	5,457,789 00	94.14	Up to 31st Dec., 1866, and exclusive of $1,464,736.93 Interest accrued on Government Loan, up to 1st July, 1867.
			20,264,800 01	20,264,800 01	104,624,284 99	124,889,085 00	1605.89	For details respecting Debt of the Grand Trunk, Great Western and Northern Railways to Government, and the Interest accrued thereon—See Public Accounts for 1867—also Statements under "Railways" in References at end of this Appendix.
5	London and Port Stanley				E. 1,032,850 00	1,032,850 00	24.00	Up to 31st January, 1866.
6	Cobourg and Peterborough, & Marmora Railway (only 14 miles open for traffic in 1866.)				F. 900,000 00	900,000 00	28.00	This is the original cost of the road and its equipment to the present owners; the present value is stated at $109,000. The length of the Marmora Railway has not been ascertained. The Cobourg and Peterborough line has been closed during several years. The Marmora portion is reported to be in operation.
7	Erie and Ontario				G. 300,000 00	300,000 00	17.00	This was a horse railway which was constructed under a charter granted in 1835; it was opened in 1835 between Queenston and Chippewa in lieu of the former portage occupied by the Welland Canal. The charter of this railway was amended in 1852, and the line of railway was established between Niagara on Lake Ontario and the Falls of Niagara. A sum of $20,987.92 was issued in Debentures by the Government for the horse railway, prior to the Union. This sum has been entered under Roads, U. C., at page 514.
8	Ottawa and Prescott				H. 2,008,994 00	2,008,994 00	54.00	Expenditure up to 31st December, 1866.
10	Carillon and Grenville				98,761 00	98,761 00	12.75	do do do Worked only in Summer.
11	St. Lawrence and Industry				54,100 00	54,100 00	12.00	do do do do do
12	Port Hope, Lindsay and Beaverton.				I. 1,993,580 00	1,993,580 00	56.50	do do Includes Branch to Peterborough.
13	Welland				J. 1,622,843 00	1,622,843 00	25.00	do do to 31st December, 1866.
14	Brockville and Ottawa				K. 2,647,004 00	2,647,004 00	86.50	do do do do
15	Stanstead, Shefford and Chambly.				L. 1,216,000 00	1,216,000 00	43.00	do to 31st Dec., 1865. No return for 1866. This road is worked by the Vermont Central Railroad Co.
16	Peterbor'gh & Chemung Lake				Appears to be in	cluded in No. 6	4.00	Used to be worked by Cobourg and Peterborough R., but does not appear to be in operation at present.
	Total, L. & Upper Canada		20,264,800 01	20,264,800 01	116,498,416 99	136,763,217 00	1968.64	Includes about $6,822,840 invested by Municipalities

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* The numbers marked opposite each Railway, are those given in the Report of the Railway Commissioners for 1859-1860.

For references A, B, C, D, E, F, G, H, I, J, K, L,—see Statement at end of this Appendix, showing sums invested in Railways by the Municipalities of Lower and Upper Canada.

APPENDIX No. 70.—*Continued.*

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

No. per R. Com. Rep.	WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Construction and Equipment so far as ascertained, up to 30th June, 1867.	Length in miles exclusive of sidings and double track.	REMARKS.
		Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure up to 30th June, 1867.				
	ABSTRACT.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
*	RAILWAYS, LOWER CANADA.							
2	Grand Trunk — Proportion spent according to mileage.	....	7,098,893 26	7,098,893 26	32,390,810 16	39,489,703 42	424.50	Expenditure up to 31st December, 1866.
11	St. Lawrence and Industry...	....	....	....	54,100 00	54,100 00	12.00	do do do
15	Stanstead, Shefford and Chambly.	....	....	....	M. 1,216,000 00	1,216,000 00	43.00	do do 1865.
9	Montreal and Champlain	....	....	....	2,417,688 00	2,417,688 00	83.00	do do 1866.
10	Carillon and Grenville.........	....	....	....	N. 98,761 00	98,761 00	12.75	do do do
	Total—Railways, L. Canada	....	7,098,893 26	7,098,893 26	36,177,359 16	43,276,252 42	575.25	The total expenditure, from other than Government Funds, includes about $955,440 invested by Municipalities of L. C. out of Municipal Loan Fund.
	RAILWAYS, UPPER CANADA.							
2	Grand Trunk—Proportion spent according to mileage.	....	8,043,740 08	8,043,740 08	36,701,954 50	44,745,694 58	481.00	Expenditure up to 31st December, 1866.
8	Ottawa and Prescott...........	....	....	....	H. 2,008,994 00	2,008,994 00	54.00	do do do
14	Brockville and Ottawa	....	....	....	K. 2,647,004 00	2,647,004 00	86.50	do do do

6	Cobourg and Peterborough and Marmora Railway.	....	....	....	F. 900,000 00	900,000 00	28.00	do do do Only 14 miles open for traffic in 1866.
16	Peterborough and Chemung Lake.	....	....	....	....	Appears to be included in No. 6.	4.00	Does not appear to be in operation.
12	Port Hope, Lindsay and Beaverton.	....	....	....	I. 1,993,580 00	1,993,580 00	56.50	Expenditure up to 31st December, 1866.
3	Northern	....	2,311,666 67	2,311,666 67	C. 3,146,122 33	5,457,789 00	94.14	do do do
7	Erie and Ontario	....	....	....	G. 300,000 00	300,000 00	17.00	This amount was invested in the railway by the Municipalities of the Towns of Niagara and Chippewa prior to 1864.
13	Welland.........	....	....	....	J. 1,622,843 00	1,622,843 00	25.00	Expenditure up to 31st December, 1866.
1	Great Western	....	2,810,500 00	2,810,500 00	21,966,930 00	24,777,430 00	363.25	do 31st January, 1867.
5	London and Port Stanley.....	....	....	....	E. 1,032,850 00	1,032,850 00	24.00	do 31st January, 1866.
4	Buffalo and Lake Huron......	....	....	....	D. 8,000,780 00	8,000,780 00	160.00	do 31st December, 1866.
	Total—Railways, U. Canada	....	13,165,906 75	13,165,906 75	80,321,057 83	93,486,964 58	1393.39	The total expenditure from other than Government Funds, includes $5,867,400 invested by Municipalities of U. C. out of Municipal Loan Fund.
	Total—Railways, Lower and Upper Canada, as above.	....	20,264,800 01	20,264,800 01	116,498,416 99	† 136,763,217 00	‡ 1968.64	Exclusive of subsidiary Lines in the United States.§

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* The numbers marked opposite each railway, are those given in the Report of the Railway Commissioners for 1859–1860.

† This Expenditure is based on the returns shown in "Miscellaneous Statistics of Canada" for the year 1866, Part I, signed by John Langton, Auditor, and dated Oct., 1867. In order to compare the total cost of construction and equipment shown by this Statement, with that shown in the "Statistics" referred to, the following sums must be added and deducted, viz :—

Total Cost of Construction and Equipment as above................	$136,763,217 00
Add—Atlantic and St. Lawrence Railway, on United Stated Territory................	5,978,900 00
do Port Huron and Detroit Railway, do	2,169,736 00
	144,911,853 00
Deduct—Erie and Ontario Railway not entered in Statistics referred to................	300,000 00
Total Cost of Construction and Equipment, up to 1867, as shown by "Miscellaneous Statistics".........	$144,611,853 00

For references A, B, C, D, E, F, G, H, I, J, K, L, M, N, see Statement at end of this Appendix showing sums invested in Railways by the Municipalities of Lower and Upper Canada.

‡ For Sections of Railways and dates of opening of each Railway in Lower and Upper Canada, see Tables of the same in References, at end of this Appendix. The length of each railway is taken from the Report of the Railway Commissioners for 1859–60, and from the Railway Tables for 1868, and do not agree in all cases with those shown in "Miscellaneous Statistics" before referred to.

§ For details respecting Rolling Stock, Passengers, Receipts, Working Expenses, &c., on the respective Railways. See Statements under "References to Railways" at end of this Appendix, and "Miscellaneous Statistics."

APPENDIX No. 70.—*Continued.*

GENERAL ABSTRACT FOR THE PROVINCE OF LOWER CANADA, NOW THE PROVINCE OF QUEBEC.

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

See Page of Appendix.	WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Canal, &c., in miles.	Number of Locks, &c.
		Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
483	ST. LAWRENCE NAVIGATION:—							
	Lachine and Beauharnois Canals, Lake St. Peter, Lachine, Côteau and Cedars Rapids	446,809 98	4,988,787 89	5,435,597 87	40,000 00	5,475,597 87	31.25	14
484	MONTREAL AND KINGSTON NAVIGATION, *viâ* OTTAWA:—							
	Ste. Anne Lock, Carillon, Chute à Blondeau and Grenville Canals	19,860 02	177,650 13	197,510 15	....	197,510 15	8.14	12
485	MONTREAL AND LAKE HURON NAVIGATION, *viâ* OTTAWA:—							
	Chats Canal (Not completed)	....	482,950 81	482,950 81	....	482,950 81	2.83	6
485	RICHELIEU AND LAKE CHAMPLAIN NAVIGATION:—							
	St. Ours Lock and Dam, and Chambly Canal	322,441 58	433,807 83	756,249 41	....	756,249 41	12.13	10
488	WORKS ON NAVIGABLE RIVERS:—							
	Richelieu Rapids and North River	....	14,394 61	14,394 61	....	14,394 61		
	Total—Canals and Improvements on Rivers....$	789,111 58	6,097,591 27	6,886,702 85	40,000 00	6,926,702 85	54.35	42

491	HARBORS AND PIERS :—							
	Amherst, Gaspé, Rimouski, Rivière du Loup, Port aux Quilles, Rivière Ouelle, Malbaie, Eboulements, L'Islet, Grosse-Ile, Berthier, Montreal, St. Lawrence Rapids, St. Anicet	357,700 00	965,139 99	1,322,839 99	43,538 67	1,366,378 66	....	....
499 and 548	LIGHT HOUSES, BEACONS AND BUOYS :—							
	From the Straits of Belle-Ile to the Province Line between Lower and Upper Canada..............................	472,024 74	672,665 96	1,144,690 70	....	1,144,690 70	....	....
	Total—Works connected with Navigation......$	1,618,836 32	7,735,397 22	9,354,233 54	83,538 67	9,437,772 21	54.35	42
510	SLIDES, DAMS, PIERS AND BOOMS :—							
	Rivers Saguenay, St. Maurice and Ottawa........................	....	748,783 18	748,783 18	....	748,783 18	....	....
513	ROADS :—Including Turnpike and Colonization Roads.........	1,129,312 03	1,694,893 79	2,824,205 82	936,175 43	3,760,381 25	Length of Roads, exclusive of Colonization Roads. 1,402.19	....
516	BRIDGES :—Exclusive of those on Turnpike and Colonization Roads, the cost of which includes that of Bridges.........	....	353,357 81	353,357 81	....	353,357 81	....	Bridges. 131
533-545	PUBLIC BUILDINGS :—Exclusive of those constructed by Charitable Institutions or private donations, (see References at end of this Appendix)............................	1,483,552 18	2,551,135 67	4,034,687 85	60,000 00	4,094,687 85	....	
549	PROVINCIAL VESSELS :—One half of total cost charged to each province..	21,736 21	152,892 20	174,628 41	79,228 00	253,856 41	....	
	Total Cost of Works, exclusive of Railways —Lower Canada..... ....$	4,253.436 74	13,236,459 87	17,489,896 61	1,158,942 10	18,648,838 71	....	
555	RAILWAYS :—Exclusive of Subsidiary Line in United States	....	7,098,893 26	7,098,893 26	36,177,359 16	43,276,252 42	Total length of Railways (maintrack exclusive of sidings, &c.) 575.25	
	Total Cost of Works—Lower Canada..........$	4,253,436 74	20,335,353 13	24,588,789 87	37,336,301 26	61,925,091 13		

APPENDIX No. 70.—*Continued.*

General Abstract for the Province of Upper Canada, now the Province of Ontario.

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

See Page of Appendix.	WORKS.	Expenditure from Funds of Provincial Government.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Canal, &c., in miles.	Number of Locks, &c.
		Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
483	St. Lawrence Navigation:—	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
	Cornwall, Williamsburgh, Welland and Burlington Bay Canals and Lake St. Claire Flats..........	3,424,322 22	7,750,996 00	11,175,318 22	272,720 00	11,448,038 22	75.33	43
484	Montreal and Kingston Navigation, *viâ* Ottawa:—							
	Rideau Canal, and River Tay..........	5,630 35	155,196 30	160,826 65	3,921,701 47	4,082,528 12	126.25	52
486	River Trent Navigation..........	92,449 33	216,921 98	309,371 31	....	309,371 31	1.21	5
487	Grand River Navigation..........	2,000 00	1,302 23	3,302 23	194,559 20	197,861 43	5.25	8
487	Desjardins Canal..........	68,000 00	52,263 93	120,263 93	30,684 00	150,947 93	3.85	None.
488	Works on Navigable Rivers:—							
	Narrows between Lake Simcoe and Lake Couchiching and River Thames..........	....	13,959 72	13,959 72	....	13,959 72	....	....
	Total—Canals and Improvements on Rivers..........$	3,592,401 90	8,190,640 16	11,783,042 06	4,419,664 67	16,202,706 73	211.89	108
487	Harbors and Piers:—							
	L'Original, Picton, Napanee, Presqu'Ile, Cobourg, Port Hope, Whitby, Toronto, Oakville, Dover, Burwell, Bruce, Stanley, Rondeau, Penetangore, Inverhuron, Elgin, Saugeen, Chantry Island, Owen Sound and Meaford..........	109,054 93	737,584 60	846,639 53	8,500 00	855,139 53	....	....

501	LIGHT HOUSES, BEACONS AND BUOYS :—							
	From the Province Line, between Lower and Upper Canada to Lake Superior	98,550 51	442,749 63	541,300 14	....	541,300 14	....	....
	Total, Works connected with Navigation...... .....$	3,800,007 34	9,370,974 39	13,170,981 73	4,428,164 67	17,599,146 40	211.89	108
510	SLIDES, DAMS, PIERS AND BOOMS :—							
	Rivers Ottawa and Trent........	85,142 67	512,726 82	597,869 49	....	597,869 49		
515	ROADS :—Including Turnpike and Colonization Roads........	974,008 82	2,139,614 87	3,113,623 69	....	3,113,623 69	Exclusive of Colonization Roads. 1,339.20	
516	BRIDGES :—Exclusive of those on Turnpike and Colonization Roads.	50,000 00	206,927 27	256,927 27	....	256,927 27	....	Bridges. 44
545	PUBLIC BUILDINGS :—Exclusive of those constructed by Charitable Institutions or private donations (see References at end of this Appendix)........	661,851 29	4,480,021 56	5,141,872 85	....	5,141,872 85		
549	PROVINCIAL VESSELS :—One half of total cost charged to each province........	21,736 22	152,892 20	174,628 42	79,228 00	253,856 42		
	Total Cost of Works, exclusive of Railways—Upper Canada........	5,592,746 34	16,863,157 11	22,455,903 45	4,507,392 67	26,963,296 12		
553	RAILWAYS........	....	13,165,906 75	13,165,906 75	80,321,057 83	93,486,964 58	Total length of Railways (main track exclusive of sidings, &c.) 1,393.39	
	Total Cost of Works—Upper Canada..........$	5,592,746 34	30,029,063 86	35,621,810 20	84,828,450 50	120,450,260 70		

APPENDIX No. 70.—*Continued.*

GENERAL ABSTRACT FOR THE UNITED PROVINCES OF LOWER AND UPPER CANADA.

STATEMENT showing: 1st. The Expenditure by the Provincial Government on the Construction of the Public Works of Canada, before the Union (10th February, 1841); 2nd. The Expenditure by Government, from the Union to the Confederation (1st July, 1867); and 3rd. The Expenditure from other than Government Funds.

See page of Appendix.	WORKS.	EXPENDITURE FROM FUNDS OF PROVINCIAL GOVERNMENT.			Expenditure from other than Government Funds, so far as ascertained.	Total Cost of Works, so far as ascertained, up to 30th June, 1867.	Length of Canal, &c., in miles.	Number of Locks, &c.
		Before the Union, so far as ascertained.	Since the Union, up to 30th June, 1867.	Total Government expenditure, up to 30th June, 1867.				
		$ cts.	$ cts.	$ cts.	$ cts.	$ cts.		
483	ST. LAWRENCE NAVIGATION :— Lachine, Beauharnois, Cornwall, Williamsburgh, Welland and Burlington Bay Canals, Lake St. Peter, Lachine Côteau and Cedars Rapids, and Lake Ste. Claire Flats.	3,871,132 20	12,739,783 89	16,610,916 09	312,720 00	16,923,636 09	106.58	57
484	MONTREAL AND KINGSTON NAVIGATION, *viâ* OTTAWA :— Ste. Anne Lock, Carillon, Chute à Blondeau, Grenville and Rideau Canals, and River Tay	25,490 37	332,846 43	358,336 80	3,921,701 47	4,280,038 27	134.39	64
485	MONTREAL AND LAKE HURON NAVIGATION, *via* OTTAWA :— Chats Canal (not completed)	......	482,950 81	482,950 81	......	482,950 81	2.83	6
485	RICHELIEU AND LAKE CHAMPLAIN NAVIGATION :— St. Ours Lock and Dam, and Chambly Canal	322,441 58	433,807 83	756,249 41	......	756,249 41	12.13	10
486	RIVER TRENT NAVIGATION	92,449 33	216,921 98	309,371 31	......	309,371 31	1.21	5
487	GRAND RIVER NAVIGATION	2,000 00	1,302 23	3,302 23	194,559 20	197,861 43	5.25	8
487	DESJARDINS CANAL	68,000 00	52,263 93	120,263 93	30,684 00	150,947 93	3.85	None.
488	WORKS ON NAVIGABLE RIVERS	......	28,354 33	28,354 33	......	28,354 33		
	Total—Canals and Improvements on Rivers......$	4,381,513 48	14,288,231 43	18,669,744 91	4,459,664 67	23,129,409 58	266.24	150
497	HARBORS AND PIERS :— On the St. Lawrence, including one pier on the Ottawa	466,754 93	1,702,724 59	2,169,479 52	52,038 67	2,221,518 19		

551	LIGHT HOUSES, BEACONS AND BUOYS:— On the St. Lawrence from the Straits of Belle-Ile to Lake Superior......	570,575 25	1,115,415 59	1,685,990 84	....	1,685,990 84	....	....
	Total—Works connected with Navigation........$	5,418,843 66	17,106,371 61	22,525,215 27	4,511,703 34	27,036,918 61	266.24	150
510	SLIDES, DAMS, PIERS AND BOOMS:— On the Rivers Saguenay, St. Maurice, Ottawa, and Trent..	85,142 67	1,261,510 00	1,346,652 67	....	1,346,652 67		
515	ROADS:—Including Turnpike and Colonization Roads.......	2,103,320 85	3,834,508 66	5,937,829 51	936,175 43	6,874,004 94	Exclusive of Colonization Roads. 2741.39	
516	BRIDGES:—Exclusive of those on Turnpike and Colonization Roads......	50,000 00	560,285 08	610,285 08	....	610,285 08	....	Bridges. 175
547	PUBLIC BUILDINGS:—Exclusive of those constructed by Charitable Institutions or private donations........	2,145,403 47	7,031,157 23	9,176,560 70	60,000 00	9,236,560 70		
549	PROVINCIAL VESSELS	43,472 43	305,784 40	349,256 83	158,456 00	507,712 83		
	Total Cost of Works, exclusive of Railways—Lower and Upper Canada..........$	9,846,183 08	30,099,616 98	39,945,800 06	5,666,334 77	45,612,134 83		
553	RAILWAYS:—Lower and Upper Canada........	....	20,264,800 01	20,264,800 01	116,498,416 99	136,763,217 00	Total length of Railways, exclusive of sidings, &c. 1968.64	
	Total Cost of Works—Lower and Upper Canada...$	9,846,183 08	50,364,416 99	60,210,600 07	122,164,751 76	182,375,351 83		

* GENERAL REMARK.

☞ The sums in the column of "Government Expenditure before the Union," to which * is prefixed, show only the amount for which Debentures were issued and outstanding. They are taken from a Return made to an address from the Legislative Assembly, and signed by D. Daly, Secretary, at Montreal, 27th July, 1847; the expenditure made otherwise on these works, prior to the Union, has not been ascertained. The other sums in the same column, embrace the expenditure in Debentures, or from other sources, so far as ascertained; the sums in the latter case, have been taken partly from a Return of the "Annual Revenue and Expenditure of Lower and Upper Canada, from the beginning of the Constitution of each Province, to that of their Union"; this Return was published by order of the Legislative Assembly, at Montreal, in 1847, apart from the Return of 27th July, 1847, before referred to; a portion has also been obtained by consulting the Parliamentary Records and the books of the Local Commissioners under whom works were constructed before the Union.

The "Government Expenditure since the Union" is based on the "Public Accounts"—the published "Reports of the Commissioners of Public Works" and on other official documents. Most of this Expenditure, was incurred under the Department of Public Works.

In the "References" which follow, various explanations are given and statements furnished, in relation to the respective works:

DEPARTMENT OF PUBLIC WORKS,
Ottawa, 8th April, 1868.

G. F. BAILLAIRGÉ, C.E.

APPENDIX No. 70.—*Continued.*

REFERENCES.

ST. LAWRENCE NAVIGATION.

LACHINE CANAL.

The following particulars regarding the old canal have been obtained from a statement dated Montreal, 15th March, 1842, and signed F. Griffin. The work was commenced in 1821, under the Provincial Statute, 1 Geo. IV, cap. 6. The Canal was partially opened in 1824 and completed in 1825, at an expense of £109,601 9d. ($438,404.15) currency. (In a Report of the Directors of the Welland Canal, dated the 31st December, 1829, the the cost is stated at £120,000). The funds were furnished by the Government of Lower Canada with the exception of £10,000 contributed by the Military Government, to secure a free passage for troops, stores, &c. (In a despatch from the Secretary of State to the Governor of Upper Canada, dated the 30th September, 1826, it is stated that £12,000 were granted by the Imperial Government.)

The old locks of this Canal which measure 100 × 20 feet and are now used for various purposes, had a depth of about 5 feet water on the sills.

The enlargement of the entire work was commenced in the end of 1843 and completed in 1849; the new locks are 200 × 45 feet with 9 feet water on the sills, excepting the two locks at the Montreal terminus, which have each a depth of 16 feet water on the sills, to allow sea-going vessels to pass into the second basin which it is proposed to excavate to a corresponding depth at a future period, the first basin having been deepened already.

See Appendix N, Report of Public Works for 1848, pages 55 to 59—84, 85, from which the above is taken.

A.—A small part of this expenditure may have been from tolls, as the loans authorized under the different Acts only amounted to £97,000 ($388,000).

B.—Expenditure since the Union, taken from Appendix No. 1, Statement No. 1, page 3

BEAUHARNOIS CANAL.

This Canal was commenced in 1842 and opened in the autumn of 1845; the locks are of the same size as the new locks on the Lachine Canal; the dams at the upper end of the Canal, from the main shore to Grande Ile and thence to Ile aux Chats, were commenced in May 1849 and completed in June 1850, at a cost ef £5,695 17 3 ($22,783.45) —See Final Estimate, signed at Toronto, on 28th August 1850, by Samuel Keefer, Chief Engineer Public Works, in favor of Brown and Watson, contractors.

C.—Expenditure since the Union, taken from Appendix No. 1, Statement No. 1, page 3.

This sum embraces $254,807.31, paid from 1850 to 30th June, 1867, on account of damages to land caused by water since construction of dams at head of Canal.

The amount paid for damages each year, up to 30th June, 1867, is as follows, viz :—

	£	s.	d.	
1851	4,245	12	5	
1852–3	6,387	0	4	
	454	8	2	
1854–5	31,185	12	6	
	1,753	18	2	
1856	365	18	10	
1857	787	17	7	
	1,491	10	0	
	60	0	0	
Carried over.........	£46,731	18	0	=$186,927.60

APPENDIX No. 70.—REFERENCES.—*Continued.*

The amount paid for damages each year, up to 30th June, 1867.—*Continued.*

Brought over.........£	46,731 18 0=	$186,927.60
1858	$34,652 45	
1859	None.	
1860	14,331 50	
1861	None.	
1862	338 00	
1863	5,143 00	
1864	462 96	
1865	486 55	
1866	10,625 24	
1867	1,840 01	
		$67,879 71

Total for damages caused by water, since construction of dams at head of Beauharnois Canal.................................... $254,807 31

See Reports on Public Works, 1851 to 1867.

CORNWALL CANAL.

Operations on this Canal were commenced in 1834, under local Commissioners appointed by an Act of the Legislature of Upper Canada, and suspended in 1838, when the work was well advanced for want of funds. Up to this period the expense was defrayed by the Government of the Upper Province. In 1842 the operations were resumed under the direction of the Board of Works of the united provinces of Upper and Lower Canada. (See Appendix N, Report of Public Works for 1848, pages 54 to 59—84, 85.)

The locks on this Canal are 200 × 55 feet and the depth of water on the sills, is 9 feet, or the same as in the Lachine and Beauharnois Canals.

Prior to the year 1800 and until the time of the construction of the Cornwall Canal, the Long Sault Rapids were ascended by bateaux, by means of two small locks; one of these which was a wooden lock, was situated near the village of Moulinette and was constructed by Adam Dixon, a merchant of that village.

D.—In a Report of a select Committee to the House of Assembly, dated 30th January, 1840, and which is the last public document that has been found relating to the work, while under the charge of Commissioners, the expenditure, up to the end of 1839, is stated at £356,579 ($1,426,316).

The books kept for the Commissioners show the following expenditure for each year, up to the end of 1839:

	£	s.	d.	
1834	31,429	18	6	
1835	85,849	12	8½	
1836	82,821	13	6	
1837	117,424	19	10	
1838	36,676	17	6½	
1839	7,931	9	9¼	
Total	£362,134	11	10¼	=$1,448,538.37

At this period a sum of £5,215 15s. 6¼d. ($20,863.10) was due on outstanding Notes given by the Commissioners to Contractors.

In 1840 the books show an expenditure of only a few pounds, while none is shown either in 1841 or 1842. See Appendix N, before referred to.

E.—Expenditure since the Union taken from Appendix No. 1, page 3.

APPENDIX No. 70.—REFERENCES.—*Continued.*

WILLIAMSBURGH CANALS.

These Canals (excepting the Junction which was commenced in 1852 and opened in 1856) were commenced in 1843–4; the Galops was opened in November, 1846, the others in 1847. The locks and depth of water on the sills are the same as on the Lachine and Beauharnois Canals.

F.—Expenditure since the Union taken from Appendix No. 1, Statement No. 1, page 3. It comprises a sum of $230,796.11 for the construction of the Junction Canal which connects the Iroquois and Galops Canals.

General Expenditure on St. Lawrence Canals.

G.—Out of this amount, $41,837.79 were expended for supplying the St. Lawrence Canals with solid Lock Gates instead of the framed gates, with sheeting, originally used.

Total Expenditure on St. Lawrence Canals.

H.—The expenditure on these Conals, according to the Provincial books, is as follows, viz:—

Prior to the Union	$1,760,390 30
Since the Union	5,670,817 74
Total per Public Accounts for 1867	$7,431,208 04

The sum expended before the Union agrees with that shown by a Return to the Legislative Assembly, dated 27th July, 1847, indicating the amounts expended on each public work, prior to the Union and after.

This Return to which reference will again be made, does not appear to show the total expenditure prior to the Union, in all cases, but merely the amounts assumed by the Province at the time of the Union, on account of the Public debt of the United Provinces. It does not embrace the expenditure on works charged to the Consolidated Revenue Fund and not applicable to the Public Debt.

The expenditure since the Union compared with that shown in the present statement, is as follows, viz:—

Under Department of Public Works	$5,665,331 36
Under Cornwall Canal Commissioners	17,312 62
Total	$5,682,643 98
Expenditure according to Finance Department	5,670,817 74
Difference	$ 11,826 24

This difference, it appears, is on account of a deduction for receipts from Land Sales, &c.

WELLAND CANAL.

The Welland Canal was originally undertaken by a Company under an Act obtained in 1824. The work was commenced on 30th November, 1824. The main trunk from Lake Ontario to where the feeder joins it, and the feeder terminating on the Grand River, were opened on 30th November, 1829; and the trunk from the Junction to Port Colborne in 1832, with a draft of 7 feet water.

The enlargement of the entire work was commenced under the Department of Public Works in 1841. The enlarged line throughout by way of the feeder to Port Maitland was opened in 1845, and the trunk from the Junction to Port Colborne, with the Grand River

APPENDIX No. 70.—REFERENCES.—*Continued.*

level, in 1850; since this date, the Port Colborne Branch has been gradually enlarged and deepened to obtain the Lake Erie level, with a draft of 10 feet water, which object is now nearly achieved.

The largest vessel that can pass through this Canal will carry 440 tons, but large traders seldom exceed 400 tons, through the smallest locks of 150 × 26½ feet, which regulate the capacity of the Canal; they may carry from 600 to 700 tons through the largest locks of 200 × 45 feet. The Propeller Welland (145 × 25 feet) with a declared tonnage of 350 tons, carries 4,400 Blls. of flour through the Welland Canal with a draft of 10 feet water and only 3,300 Blls. through the St. Lawrence Canals, where the draft is only 9 feet. Vessels navigating the Welland seldom carry more than 4,000 Blls. of flour. The general tonnage of steamers in use on this Canal varies from 226 to 277 tons register, and that of sailing vessels from 309 to 413. For further details, see Appendix N, Rep. Pub. Wks. for 1848, pages 53 to 59.—84, 85 also Rep. Pub. Wks. for 1867.

I, J, K.—These are the amounts expended for old and new works, prior to and since the Union, according to a Statement (No. 85,136) signed by Wm. Dickinson, Deputy Inspector General in 1867. See Appendix No. 29, at page 330.

J, K.—The expenditure by the Department on the construction of this Canal since the Union in 1841, to 1st July, 1867, as shown in Appendix No. 1 at page 3, is $4,900,820.60. This sum does not include the amount expended by the Government previous to the Union, nor the amount paid for the purchase of stock, &c., since the Union.

I.—In the Return to the Legislative Assembly dated 27th July, 1847, already referred to, the expenditure, prior to the Union, is shown as £503,924 6s. 5d.=$2,015,697.28.

According to a memorandum of the 19th February, 1848, from the Finance Department, this latter sum includes the expenditure on account of *Old Works*, up to the date of the *Return*, or for 6 years subsequent to the Union.

BURLINGTON BAY CANAL.

This Canal may be considered a branch of the main line of the St. Lawrence Navigation, and is simply an artificial channel between two lines of wooden piers filled with stones, across a low sandy beach which separates Lake Ontario from a large sheet of water called Burlington Bay. By this Canal, vessels drawing 10 feet water are enabled to reach the City of Hamilton and the Desjardins Canal.

The construction of the Canal was authorized by an Act passed on the 19th March, 1823; it was commenced under local Commissioners in 1825, opened for the passage of vessels in 1830 and completed as originally undertaken in 1832; the works have since been extended, improved and partly reconstructed.

L—This amount was spent under local Commissioners; it does not appear in the Return of the 27th July, 1847.

L, M.—In the Public Accounts for 1867, the expenditure on this work is shown at ...... =$308,328.32. This amount does not embrace expenditure prior to the Union; it shows that $17,283.83 have been expended under the Finance Department, since the Union, in addition to the outlay under the Department of Public Works, shown in Appendix No. 1, page 3.

N.—A sum of £1,584 11s. 10d. ($6,338.37) was paid for raising the wreck of the "Eleonora" and one of £387 16s. 3d. ($1,551.25) for protecting the works, but as these were taken from tolls, they are not included in the expenditure.

APPENDIX No. 70.—REFERENCES.—*Continued.*

LAKE STE. CLAIRE FLATS.

O, P.—The South or Walpole channel has been dredged to a depth of 12 and a breadth of 300 feet, for a distance of about 1 mile, the remainder of the channel through the Lake being of sufficient depth. The work was commenced by private parties in 1855, and was afterwards continued in 1857 and 1858 by the Engineers of the United States Government, who appropriated a sum of $45,000 and the necessary dredging machines and scows (worth about $5,000) for that purpose; they completed the channel to a breadth of 200 feet in August, 1858. This channel was widened subsequently the same year to 300 feet by the Canadian Government at a cost of $19,984.45. See Statement No. 3 in Appendix No. 1 at page 6.

LAKE ST. PETER.

The River St. Lawrence between Quebec and Montreal has been dredged for a distance of about 11½ miles through Lake St. Peter, from a depth of 11½ to a depth of 20 feet at low water, in order to enable sea-going vessels of a corresponding draught of water to reach Montreal. This work was transferred from the direction of the Department of Public Works to that of the Montreal Harbor Commissioners in virtue of an Act passed in August, 1850.

The work done under the Department of Public Works was in a straight or artificial channel across the flats; it was commenced in 1844, suspended in the summer and resumed in the fall of 1846; it was again suspended on 16th September, 1847 for the want of funds. The artificial channel was dredged for a length of about 7 miles and a width varying from 100 to 150 feet, with a depth of 14 feet at low water; the distance remaining to be dredged was from from 1½ to 2 miles. This channel was abandoned by the Harbor Commissioners who have deepened and enlarged the natural channel; the dredging in this channel was completed to a depth of 20 feet as above stated, in the fall of 1865.

Q—The expenditure by the Department on this work, as shown in Appendix No. 1, Statement No. 3, at page 6, is $103, 240.50.

The total cost of the works done by the Department and the Harbor Commissioners, up to the 30th June, 1867, amounts to $1,164,235.08, as shown by the Public Accounts for 1867.

LACHINE, COTEAU AND CEDARS RAPIDS.

Prior to the construction of the Beauharnois Canal, the navigation between Lakes St. Louis and St. Francis was effected by means of short canals and locks at the Cascades, Cedars and Côteau du Lac.

Prior to 1804, they were as follows, viz:

	Length of Canal.	Width of Lock.
At the Cascades—Old French canal and lock at the Faucille, about	400 ft.	6 ft.
Do do do Trou du Moulin,	200	6
Do Old Lock at Split Rock..............................	200	6
At Côteau du Lac—Canal and 2 locks................................	900	7

These Canals had a depth of 2½ feet on the mitre sills of the locks which were of stone, and were designed for the passage of boats capable of carrying from 30 to 40 Bls. of flour.

In 1804, the locks at "Split Rock" and "Côteau du Lac" were partly rebuilt, and a new canal, about ½ mile in length, with 3 locks, 6 feet in width between the quoin posts of the gates, was constructed at the foot of the Cascades instead of the Old French locks at the "Faucille" and the "Trou du Moulin." In 1817 the locks were enlarged by the "Royal Staff Corps," from 6 to 12 feet in breadth and the depth of water on the sills was increased from 2 to 3½ feet, for the passage of boats capable of carrying from 80 to 100 blls. of flour.

APPENDIX No.170.—REFERENCES.—*Continued.*

These works were under the control of the Board of Ordnance and Royal Staff Corps, and were constructed chiefly at the expense of the Imperial Government by whom they were transferred, together with the Ottawa and Rideau Canals, and other property, to the Provincial Government, and the transfer was authorized to be accepted by an Act of the Canadian Parliament, of 30th May, 1855, and it was accepted by an Order in Council of the 25th January, 1856.—See Appendices Nos. 58 and 60, pages 444 to 447, 449 to 450, respecting transfer. The expenditure on the works at Cascades, Split Rock and Côteau du Lac, has not been ascertained, all documents relating thereto having been destroyed by fire in the Ordnance Office at Montreal, in 1852.

The following Table shows the Revenue and Expenditure on the Cascades, Split Rock and Côteau du Lac Canals, from 1815 to 1834.

Years.	Gross Revenue.			Cost of Repairs, &c.			Net Revenue.		
	£	s.	d.	£	s.	d.	£	s.	d.
1816	873	5	0	307	8	5	565	16	7
1817	744	5	0	300	1	1	444	3	11
1818	1,624	17	6	336	3	6	1,288	14	0
1819	1,513	5	0	346	13	2	1,166	11	10
1820	1,833	10	0	429	11	3	1,403	18	9
1821	1,654	15	0	476	1	2	1,178	13	10
1822	1,558	10	0	523	3	0¾	1,035	6	11¼
1823	1,328	0	0	633	12	4	694	7	8
1824	1,254	0	0	557	16	3	696	3	9
1825	1,007	0	0	133	14	8	873	5	4
1826	1,881	2	10	1,421	0	10¾	460	1	11¼
1827	2,230	5	0	881	18	6	1,348	6	6
1828	2,089	17	6	579	11	6½	1,510	5	11½
1829	1,273	12	6	253	15	3	1,010	17	3
1830	2,627	17	6	779	19	8	1,847	17	10
1831	2,447	10	0	341	6	5	2,106	4	7
1832	2,545	5	0	932	3	11¾	1,613	1	0¼
1833	3,093	15	6	875	15	1	2,218	0	5
Totals £	31,580	13	4	10,109	16	2¾	21,470	17	1¼

R.—Erom Appendix N, Report of Public Works for 1848, pages 84, 85.

This expenditure embraces the following sums, viz :

In 1805. Granted by a bill of the Legislature of Lower Canada, and expended ed under Local Commissioners for improvement of the navigation between Montreal and Lake St. Francis £1,000=	$ 4,000 00
This sum was devoted to the improvement of the Lachine Rapids.	
In 1806. Granted by another bill of the same Legislature, and expended under Local Commissioners, for removal and blasting of rocks, deepening of channel, &c., between Montreal and Laprairie, at Point St. Charles, in Lachine Rapids, and in Rapids above £1,000=	$ 4000 00
Towards 1832. A further sum was granted and expended, in removing obstructions, cutting a canal of about ¼ mile in length across the point at Cedars Village and commencing a canal of about ¾ mille in length across a point further up, on the properties of Joachim Watier dit Lanoix, Duncan, Perry, Birmingham and French, immediately, above the Canal and Fort at Côteau du Lac, for the purpose of facilitating the towage of Bateaux or Durham Boats up the Rapids.* This amounted to	40,405 83
Total as entered	$48,405 83

N.B.*—This Canal was ¼ mile in length up to 1841 when it was extended from the Cut on Watier's farm up to French's, a total distance of ¾ mile, by Mr. McBaine, by permission of Government. He built a Lock at French's about 120 × 15, 4 feet lift, 4 ft. water.

APPENDIX No. 70.—REFERENCES.—*Continued.*

MONTREAL AND KINGSTON NAVIGATION *viâ* OTTAWA.

STE. ANNE LOCK.

This canal was begun in the spring of 1840, and opened in June, 1843. The lock is 190 feet long by 45 feet wide with 7 feet water on the sills in the ordinary state of the river and 6 feet during the lowest stage of the water.

A.—See Appendix N, pages 84, 85, Public Works Report for 1848. This expenditure was under the Board of Works of Lower Canada.

B.—See Appendix No. 1, Statement No. 1, at page 3.

CARILLON, CHUTE A BLONDEAU AND GRENVILLE CANALS.

These canals were commenced after 1819 and completed in 1833. They were constructed by the Royal Staff Corps at the expense of the Imperial Government, who afterwards transferred them to the Provincial Government; they were placed under the control of the Department of Public Works by an Order in Council, dated 3rd March, 1857. (For details respecting transfer, see Appendices Nos. 58 and 60, pages 444 to 450). The depth of water on the sills of the Locks of these canals is 6 feet; the dimensions of the locks vary from 106$\frac{5}{6}$ × 19 to 130$\frac{5}{6}$ × 32$\frac{5}{6}$.

C.—The expenditure by the Imperial Government on the Carillon, Chute à Blondeau and Grenville Canals has not been ascertained; all the records relating to these works were kept in the Ordnance Office at Montreal which was destroyed by fire in 1852.

D, F.—These are the sums that were expended under the Department of Public Works for improvements and extraordinary repairs.

RIDEAU CANAL.

This canal was commenced on the 21st of September, 1826, and was completed on the 29th of May, 1832; the depth of water on the sills of the locks is 5 feet, and the dimensions of the locks 134 × 33.

This work was constructed at the expense of the Imperial Government who afterwards transferred it to the Provincial Government, at the same time as the Carillon, Chute à Blondeau and Grenville Canals, as already explained.

D, F.—According to Appendices Nos. 60, 61, pages 449 to 451, the total expenditure by the Provincial Government, on these canals which are known under the general name of the "Ordnance Canals," is as follows, viz:

	$ cts.	$ cts.	$ cts.
On all the Ordnance Canals above named, from 1st Oct., 1853 to 1st January, 1857, by Finance Department.—See Appendix No. 60, page 450	....	....	137,331 40
On the Carillon, Chute à Blondeau and Grenville Canals, from 1st January, 1857 to 1st July, 1867, by Department of Public Works. Ordinary repairs.....	40,515 39		
Do Extraordinary repairs...........	22,538 25	63,053 64	
Do Management..........................	48,355 44	48,355 44	111,409 08
On the Rideau Canal, from 1st January, 1857 to 1st July, 1867, by Department of Public Works. Ordinarp repairs..	56,906 74		
Do Extraordinary repairs...........	96,155 86	153,062 60	
Do Management..........................	212,166 49	212,166 49	365,229 09
Do Survey	3,146 58	3,146 58	3,146 58
Total, Expenditure under Department of Public Works, from 1st Jan., 1857 to 1st July, 1867.—See Appendix No. 61, page 451..............$		(a) 479,784 75	
Total, Expenditure by Provincial Government, from 1st October, 1853, to 1st July, 1867..$			617,116 15

(a) N.B.—The item of $3,146 58 for Rideau Canal Survey, in Appendix No. 61, at page 451, should have been placed in the column preceding that of the Totals.

APPENDIX No. 70.—REFERENCES.—*Continued.*

E.—The whole of this expenditure was prior to the Union. According to memoranda from Ordnance documents, it comprises the following items, viz :

—	Sterling.			Currency.	
	£	s.	d.	$	cts.
Cost of land	44,807	12	6¼	218,063	79
Cost of work done by contract	625,545	6	5	3,044,320	56
Cost of Lock Gates	23,141	6	10¾	112,621	20
Pay of Establishment	110,279	19	8	536,695	92
Total cost of Rideau Canal under Imperial Government	803,774	5	6	3,911,701	47

For further details concerning expenditure by Imperial Government on Rideau Canal, &c.—See Appendix No. 7, pages 66, 67.

RIVER TAY.

This river falls into the Rideau at the foot of Lower Rideau Lake, at about 8 miles below the Town of Perth.

The works consisting of 1 wooden and 4 stone locks, 101 × 20 feet, with 4 feet water on the sills, and of dams and slides for the passage of timber, were commenced in 1831 and opened for navigation in 1834, by an incorporated Company with a capital of $16000.

The Government of Upper Canada, loaned the Company $4000 during the Session of 1833-4; and $3000 in 1836–7. See page 484.

G. *—See General Remark in abstract at page 561 respecting Government Expenditure prior to the Union, and the expenditure made otherwise.

H.—See Public Accounts for the fiscal year ending 30th June, 1867.

I.—Amount probably expended out of the funds of the Company.

MONTREAL AND LAKE HURON NAVIGATION, *viâ* OTTAWA.

The Act 7th Wm. IV, Cap. 57 of 4th March, 1837, authorized the appointment of Commissioners to Survey the Ottawa River and country bordering on it, together with the waters lying between the Ottawa and Lake Huron, and granted $12000 for this purpose.

New Surveys in connection with the proposed navigation from Montreal to Lake Huron were authorized and made in 1857–1859, the former by W. Shanly, and the latter by T. C. Clarke.

CHATS CANAL.

This canal extends from the foot of Rapide des Chats to Chats Lake; it was commenced in August, 1854, and is yet in an unfinished state, the work having been suspended on 15th November, 1856; it was designed with locks of 190 × 45 feet, similar to the lock at Ste. Anne; the depth of water on the sills was to be 7 feet, and the total lockage 49.80 feet.

J.—Out of this amount $373,191.98 were expended by the Department of Public Works and the balance by the Finance Department. See page 485.

APPENDIX No. 70.—REFERENCES.—*Continued.*

RICHELIEU AND LAKE CHAMPLAIN NAVIGATION.

ST. OURS LOCK AND DAMS (SEE PAGE 485.)

These works were commenced in 1844 and were completed in September, 1849. The lock is 200 × 45 feet, with 7 feet depth of water on the sills; the minimum depth of the River from St. Ours to Chambly Basin a distance of about 32 miles, is 7 feet at the lowest stages of the water; the depth of water passing over the dams during freshets, varies from 8 to 10 feet.

A.—Expenditure under the Department of Public Works.—See Appendix No. 1, Statement No. 1, page 3.

CHAMBLY CANAL (SEE PAGE 485.)

This canal was commenced on 1st October, 1831, and opened in the spring of 1843; it was constructed under local Commissioners who had charge of the works until the 30th of June, 1843. The dimensions of the locks vary from 118 × 23 to 125 × 23¾, and the depth of water on the sills is 7 feet.

The square bottomed vessels in use on this route cannot draw more than 6½ feet owing to silt and slides in the Canal.

The coarse grains of Eastern Canada, a large portion of the sawed lumber from the St. Maurice, the Ottawa and other rivers emptying into the St. Lawrence, as well as a large amount of flat and square timber in rafts, find their way each year to the American markets over this route.

Lake Champlain which commences near Rouse's Point, at about 23 miles above St. John's, or the upper terminus of this canal, is about 111 miles in length; from St. John's to Whitehall at the head of the Lake, a distance of 134 miles, the Richelieu and Lake Champlain are navigated by freight boats of 500 tons, and from Rouse's Point to Whitehall by Steamboats of 700 tons. The "Vermont" of 167 tons is the first American Steamer that ran on Lake Champlain in 1809, some 200 years after its discovery by Samuel de Champlain.

B, C.—The outlay, under the Local Commissioners, up to the 30th June, 1843, may be stated approximately at £120,204. disbursed as under:—

From the Funds or under the security of the Province of Lower Canada	£107,004=	$428,016
From the Funds of the United Provinces of Upper and Lower Canada	13,200=	52,800
	£120,204=	$480,816

In addition to this sum, the following payments were made to John Jones for interest on £35,000, at 6 per cent., lent by him to the Commissioners, and for which Loan, debentures were issued. This sum is not included in the expenditure under the Local Commissioners; it is as follows:—

1842, May 1st, Interest for 6 months to this date paid by warrant from Governor General	£1,050
Do Sept. 6. Balance of interest due 1st Nov., 1841, paid by warrant from Governor General	400
Do Nov. 1. Interest for 6 months to this date, paid by warrant from Governor General	1,050
1843. May 1. Interest for 6 months to this date, paid by Check from Board of Works	1,050

Total Interest paid, to 1st May, 1843............£3,550=$14,200

APPENDIX No. 70.—REFERENCES.—*Continued.*

D.—Expenditure under the Department of Public Works, exclusive of advances made to Local Commissioners.—See Appendix No. 1, Statement No. 1, page 3.

E, F.—See Appendix N, Report of Public Works for 1848, pages 84, 85, and remarks at page 55, also pages 58, 59 of same report.

G.—In the Return of the 27th July, 1847, before referred to, the amount charged against the Chambly Canal, prior to the Union, is nearly £35,000 ($140,000) which appears to be the amount loaned from John Jones as above, under the Act 3 Vic., cap. 31.

H.—This is the amount that appears in the Public Accounts for the fiscal year ending 1st July, 1867.

RIVER TRENT NAVIGATION.

The works on this river were designed for a navigation of 5 feet depth of water over the sills of the locks, the dimensions of which were fixed at 134 × 33; the depth of water generally maintained on the sills varies from 4 to 5 feet, and the dimensions of the locks from $133\frac{1}{6}$ × 32 to 134 × 33. See page 486.

Chisholm's Rapids—$15\frac{1}{2}$ miles above the mouth of the Trent on Lake Ontario, at Trenton Village, which is 67 miles above Kingston.
Work commenced in 1837 and completed in 1844.
The Trent is navigable for boats of $4\frac{1}{2}$ feet draught of water at low water for $6\frac{1}{2}$ miles, from this canal down to Widow Harris' Rapids and for 13 miles up to Percy Landing. This canal has seldom, if ever, been used since the date of its completion.

Crooks Lock—$54\frac{1}{2}$ miles above the mouth of the Trent.
Work commenced in 1837 and completed in 1844.
The navigation downwards from this lock extends to Heely's Falls, a distance of 12 miles; it is being connected by means of a railway with the Iron Works of Marmora, whence the ore is forwarded to the head of Rice Lake, and thence to Cobourg on Lake Ontario.
The navigation upwards extends to the foot of Rice Lake $6\frac{1}{2}$ miles; thence to the head of the Lake $12\frac{1}{2}$ miles; thence up the Otonabee to Whitlas' $29\frac{1}{2}$ miles.

Whitlas' Lock—93 miles above the mouth of the Trent.
Work commenced in 1837 and completed in 1843.
This lock is not in working order, at present; after it is repaired, vessels may ascend from Crooks' Rapids or the Village of Hastings to the Town of Peterborough, $1\frac{1}{2}$ miles above Whitlas'.

Bobcaygean Lock—$140\frac{3}{4}$ miles above the mouth of the Trent.
Old wooden lock built in 1833–35. New stone lock built in 1855–6–7.
The navigation downwards from this lock extends $15\frac{3}{4}$ miles across Pigeon Lake to Buckhorn, and 22 miles across Chemung Lake (Mud Lake) to Bridgenorth, in all $37\frac{3}{4}$ miles; it extends upwards, for $12\frac{1}{2}$ miles on Sturgeon Lake to the outlet of the Scugog; thence up the Scugog to the Town of Lindsay, 8 miles, or in all $20\frac{1}{2}$ miles; the navigation for the total distance of $58\frac{1}{4}$ miles is adapted to steamers with a draught of 4 feet at low water.
The traffic on Buckhorn, Chemung and Pigeon Lakes, consists chiefly in towing lumber from the extensive saw mills erected along those lakes, up to the Lindsay Railway station, whence it is forwarded by railway to Port Hope on Lake Ontario, a distance of 43 miles.

Lindsay Lock—$161\frac{1}{4}$ miles above the mouth of the Trent.
Wooden lock commenced in 1837, completed in 1844. Lock converted into a slide in 1859.
Lake Scugog and the River Scugog are navigated by steamers drawing 4 feet water at low water, from Port Perry at the head of the Lake down to the Town of Lindsay, a distance of $23\frac{3}{4}$ miles.

APPENDIX No. 70.—REFERENCES.—*Continued.*

A, B.—These amounts are from a report of a Select Committee—5th Session, 13th Parlament, Upper Canada—dated 30th January, 1840.

The total expenditure prior to the Union on the section of the Trent from its mouth up to Heely's Falls, some 27 miles above Chisholm's rapids, was £22,738=$90,952 of which £12,282 6 8=$49,129.33 were expended at Myer's and Chisholm's as shown at A and B; the balance £10,455 13 4=$41,822.67 is chargeable to dams, slides, &c., on the same section of the river, (See Return to Legislative Assembly dated at Montreal 27th July, 1847, and signed by D. Daly, Secretary, showing expenditure on Public Works before and since the Union.)

C.—According to the Return above referred to, the total expenditure on the section of the Trent extending from Heely's Falls, 147½ miles up to the head of Lake Scugog, and called the "*Inland Waters of the Newcastle District,*" was £21,660=$86,640. One half of this amount or $43,320 has been charged to navigation works, and the other to works for the descent of timber, both being equally serviceable or nearly so, in either case.

D.—The cost of construction as shown in App. N, Rep. Com. Pub. Wks., for 1848 is $42,107.80 to which $3,415.97 have been added for solid lock-gates and other improvements made in 1866-7.

E, G.—See App. N., Rep. C. P. W. for 1848, at pages 58, 59.

F, H.—See Contract, 25th Oct. 1854, under which the following sums were to be expended, viz:

Scugog River Improvements	£ 3,867	6	4	=$15,469.27
Buckhorn new Slide, Bridge and Dam	2,628	17	9	= 10,515.55
Bobcaygean new Slide and Dams	3,171	10	9	= 12,686.15
Do new Lock of Masoury to be substituted to Old Wooden Lock	8,089	7	10	= 32,357.56
	£17,757	2	8	=$71,028.53

I.—The total expenditure by the Department of Public Works, since the Union on the Trent, as shown by Statement No. 2, in Appendix No. 1, at page 3, under the heading of "*Scugog Inland Navigation,*" amounts to.........$ 492,486.31

This sum embraces the following outlay on Roads and Bridges which must be deducted therefrom, viz:

ROADS, already included in list of roads.—See Appendix No. 19, pages 170, 171, Rep. for 1867—and Appendix N, pages 62, 63, 84 and 85, Rep. for 1848.

Peterborough and Norwood	£ 327	0	7	=$ 1,308.12
Port Hope and Rice Lake	7,286	11	5	= 29,146.28
Deduct for Roads	£7,613	12	0	= 30,454.40

BRIDGES, already included in list of bridges—See Appendix No. 20, pages 188 to 191, Rep. for 1867—and Appendix N, pages 68 and 69, 86 and 87, Rep. for 1848.

Bobcaygean	£ 328	15	5	=$ 1,315.08
Buckhorn	506	5	10	= 2,024.17
Peterborough	1,988	5	9	= 7,953.15
Seymour	1,367	7	5	= 5,469.48
Deduct for Bridges	£4,190	14	5	=$16,762.88

Total deductions for Roads and Bridges.........$47,217.28

APPENDIX No. 70.—REFERENCES.—*Continued.*

The balance chargeable to Canals, Locks, Dams, Slides, &c., amounts therefore to the sum of		$445,269.03
This outlay is subdivided as follows, viz:		
On Canals, Locks, Dams, &c., as previously detailed, at "Trent Navigation"	$216,921.98	
On Slides, Dams, Piers, Booms, &c., as hereafter detailed, at Slides, &c	228,347.05	$445,269.03

J.*—See General remark in Abstract at page 561, respecting Government Expenditure prior to the Union, and the expenditure made otherwise.

GRAND RIVER NAVIGATION.

K.—The Grand River connects the Welland Canal at Dunnville with the Town of Brantford, a distance of about 60 miles; it is rendered navigable by means of a succession of dams and locks at the several rapids from Indiana to Oneida, a distance of nine miles. Within this limit, there are 5 dams and as many locks, of 116½×32 feet overcoming an ascent in the river of 43 feet, with occasionally a short cut independent of the river. See page 487.

At Bunnell's Landing, near the foot of the next rapid, there are 3 locks of 146½×32 feet, placed within a short distance of each other at the foot of an independent canal which extends to Brantford. The length of this cut is 3 miles and the whole ascent gained by the locks is 33 feet.

The distance from Dunnville to Cayuga is 16 miles and from Cayuga to Brantford Bridge, 44 miles, or the entire distance from Dunnville to Brantford, 60 miles, and the entire lockage, 76 feet. The length of independent canal, including the Brantford portion is 5¼ miles, and the draught of water from 2½ to 8 feet in the river and from 2½ to 3 in the cuts.

The locks are composite, being built of stone and timber, with the faces of the walls planked; they were designed for a depth of 3 feet water on the sills.

(See Appendix N, page 66, P. W. R. for 1844, from which the above is taken.)

The works were constructed by a chartered company under the title of the "Grand River Navigation Company."

The total stock originally subscribed for, amounts to £47,412=$189,648 of which £38,256=$153,024 belong to the Six Nations Indians. (See pages 24, 26, P. W. R. for 1844.)

A sum of $2,000 was loaned to the Company by the Government on 28th January, 1840, the repayment of principal and interest being secured by bond from the Directors, dated 11th January, 1840.

The debt due to the Government on the 30th June, 1867, amounts to $3,302.23.

DESJARDINS CANAL.

L.—On the 30th January, 1826, an Act passed the Legislature of Upper Canada, incorporating a Company for the construction of a canal for sloops and other vessels of burthen from Burlington Bay to the Village of Cootes' Paradise, with a capital of £10,000, which work is now known as the Desjardins Canal. It extends from a point at the head of Burlington Bay, about two miles north of Hamilton, to the Town of Dundas, and is, including the natural and artificial navigation between three and four miles in length. The depth of water proposed was eight feet. See page 487.

The canal was opened on the 16th August, 1837, for vessels drawing 7½ feet water; and according to a Report of the Directors dated the 2nd May, 1840, cost £24,671=$98,684.

In 1840, the canal could be navigated only by boats of 30 tons, and in 1845 the depth of water was no more than 5 feet in some parts of it.

APPENDIX No. 70.—REFERENCES.—*Continued.*

The money advanced by Government to the Company is as follows:—

By 2nd Wm. IV, chap. 24, passed in the year 1832..	$ 20,000
By 5th Wm. IV, chap. 34, passed in the year 1835...	28.000
By 7th Wm. IV, chap. 65, passed in the year 1837...	20,000
Total..	$ 68,000

This loan bears interest at 6 per cent.; the total debt accrued on account of this loan amounted to $120,263.93 on 30th June, 1867—See Public Accounts for that year.

For further details concerning the Desjardins Canal, see Appendix N, P. W. R. for 1848, at pages 56, 58, 59, 84 and 85, from which the above has been taken.

LIGHT HOUSES, BEACONS AND BUOYS.

LOWER CANADA, LIGHT HOUSES (SEE PAGES 498, 499—550, 551.)

The list and cost of the Light Houses constructed at the expense of Government, under the Quebec and Montreal Trinity Boards will be found at pages 550, 551 of App. No 70. The return of these Light Houses was received too late to enter them with the other Light Houses of Lower Canada, at pages 498, 499.

A.—This expenditure, prior to the Union, was made by the Province of Lower Canada between the years 1796 and 1841. The yearly expenditure during that period is given at page 12 in a Return of the " Annual Revenue and Expenditure of Lower Canada and Upper Canada from the time of their Constitution under the English Government, to the period of their Union into one Province, on 10th February, 1841;" this Return was printed by order of the Legislative Assembly in 1847.

B.—This outlay was made between the years 1828 and 1836. See page 15 of the Return above referred to.

The expenditure under the Department of Public Works since the Union, on these Light Houses Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17 and C. D. E. and the general expenditure on Nos. 1, 2, 3, 4, 6, 7, 8, 9, 10, 16 and 17 are taken from Appendix No. 62 at page 452, signed by the Book-Keeper of the Department.

No. 5.—The Light House at Father Point was destroyed by fire on 13th April, 1867.

No. 12.—The cost of the river Lights at the Port of Montreal is taken from page 15, Schedule B of the Report of the Board of Works, dated 11th October, 1843.

No. 15.—This vessel was constructed at the expense of Messrs. Maillefert and Raasloff for the Survey of the St. Lawrence Rapids, and was afterwards purchased by the Government. See note at I, below H.

Nos. 13, 18, 19.—Actual cost not ascertained. The amounts entered are those that were estimated as their probable cost, which is the nearest approximation to the outlay, that can be arrived at. See Rep. Pub. Wks. for 1844, at page 65.

Nos. 12, 13, 18, 19.—The expenditure on these Light Houses amounting in all to $6,878.67 is charged in this Statement against the Expenditure for Inland Light Houses prior to 1858 amounting to £29,938 18 9 as shown by Pub. Wks. Rep. for 1856 at page 44. See note below at H.

UPPER CANADA, LIGHT HOUSES (SEE PAGES 500, 501.)

F.—This expenditure was incurred by the Province of Upper Canada between the years 1825 and 1841. For details of annual expenditure,—see page 28 of the Return of 1847 before referred to.

No. 20.—The expenditure for this Light House is up to 1846. See Rep. Pub. Wks. for 1846.

APPENDIX No. 70.—REFERENCES.—*Continued.*

No. 23.—The amount for converting the Light at Presqu'Ile into a colored Light has not been ascertained; it was estimated at $1200, which has been entered as the nearest approximation to the actual cost. See Pub. Wks. Rep. for 1843 at page 24 and that for 1844 at page 65.

No. 24.—See Rep. Pub. Wks. for 1849 at page 40.

Nos. 25, 26.—Actual cost not ascertained. See estimated cost Rep. Pub. for 1844 at page 65.

No. 27.— do do do 1849 at page 40.

No. 29.— do do do 1846 at page 50.

Nos. 21, 22, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38.—The outlay incurred since the Union by the Department of Public Works, on these Light Houses, and the general expenditure on Nos. 21, 22, 30 to 35, and 36 to 38, are taken from App. No. 62, at pages 452, 453.

G.—This expenditure which is also taken from App. No. 62, is for the construction of Light-Keepers' dwellings, between Montreal and Lake Superior, or at Grosse Pointe, Lancaster, Coles Shoal, Lindoe Island, Long Point on Lake Erie and Nottawasaga Island on Lake Huron, &c. The whole amount is herein charged to Upper Canada, the sum spent in Lower Canada being probably small.

H.—This sum forms part of the general expenditure on "Inland Light Houses," (£29,938 18 9=$119,755.75) shown at page 44 of Pub. Wks. Rep. for 1856; this amount is not included in App. No. 62; in the present statement it has been apportioned as follows, viz:

For Lower Canada.		For Upper Canada.	
No. 12.—River Lights, Port of Montreal	$3,878.67	No. 20.—Lancaster Pier	$ 788.07
No. 13.—Lachine	1,000.00	No. 23.—Presqu'Ile	1,200.00
No. 18.—Knight's Point	1,000.00	No. 24.—Gull Island	2,286.72
No. 19.—Grosse Pointe	1,000.00	No. 25.—Mohawk Island	5,000.00
		No. 26.—Port Maitland	800.00
Amount	$6,878.67	No. 27.—Long Point	9,094.45
		No. 29.—Goderich	1,969·40
		Amount	$21,138.64

The addition of these two amounts gives $28,017.31 which deducted from the above sum of $119,755.75 leaves a balance of $91,738.44 for inland light houses not enumerated in this statement, and applying chiefly to Upper Canada, as the inland light houses of Lower Canada between the ports of Quebec and Montreal, &c., have been generally constructed by the Trinity Houses of those ports and are under their control. For list of Light Houses constructed by Government under the Trinity Boards of Quebec and Montreal, and cost of the same. See App. No. 70, pages 550, 551.

I.—According to Appendix No. 62, at pages 452, 453, the cost of construction, fitting up, &c., of the principal light houses erected by the Department of Public Works, from the Union (10th February, 1841), to the Confederation (1st July, 1867), amounts to $	878,624 67
To this sum should be added as before explained—General expenditure on inland light houses, prior to 1st January, 1857	119,755 75
And also the value of the Point Claire light ship (No. 15) which was purchased together with other articles, on 9th September, 1854 from Messrs. Maillefert and Raasloff, sub-marine Engneers, for a sum of $4,746.45 which was charged to the survey of the St. Lawrence Rapids. The value of the vessel which was used by them in the survey of the rapids, and was afterwards converted into the present light vessel (No. 15) is estimated at	4,400 00
Total cost of light houses, beacons and buoys, Lower and Upper Canada, up to 30th June, 1867, under Department of Public Works. See page 501	$1,002,780 42

APPENDIX No. 70.—REFERENCES.—*Continued.*

The cost of the light houses constructed under the Trinity Boards of Lower Canada, up to 30th June, 1897, amounts to $204,492.65. See pages 550, 551.

J.—The following is a memorandum of various Acts concerning light houses, viz :—

The Act 10 Geo. IV, cap. 20, of 20th March, 1829.—Commissioners named to erect a light house on Long Point. $4,000 granted to defray expenses ; charge of superintendence, limited to 3 per cent.

The Act 11 Geo. IV, cap. 28, of 6th March, 1830. $1,600 granted to His Majesty by the Legislature to erect a dwelling house for light keeper, on Long Point, Lake Erie ; Commissioners to make arrangements for keeping a light during the year.

The Act 2 Vic. (3) c. 19, sec. 2 (1839)—defines limits of ports of Montreal and Quebec.

The Act 2 Vic. (3) c. 19, sec. 28 (1839)—Trinity House, Montreal, may purchase lands, islands, &c., for a hall for this corporation, also for erecting light houses, beacons, landmarks, &c.

The Acts 4–5 Vic., c. 59 (1841)—Lights within port of Montreal placed under control of Trinity House, Montreal.—(This Act is published in full in the Canada Gazette of 1841, at page 125.)

The Act 9 Vic., c. 37 (1846)—Public works constructed at public expense, to be under control of the Commissioners of Public Works.—(Light houses are not specifically mentioned, but are presumed to be comprised therein.)

The Act 12 Vic., c. 114 (1849)—Erection and management of light houses, beacons, &c., in port of Quebec, to be under control of Quebec Trinity House.—(The former Acts being repealed.)

SLIDES, DAMS, PIERS AND BOOMS.

RIVER SAGUENAY SLIDES, &C., (SEE PAGES 502, 503)

A.—The works on the Saguenay were commenced in 1856 ; no expenditure was incurred by the Government on this river for works connected with the descent of timber, before the time of the Union.

B.—Total expenditure as shown by Appendix No. 1, at page 3.

RIVER ST. MAURICE SLIDES, &C., (SEE PAGES 502, 503.)

C.—The works on the St. Maurice were commenced in 1852 ; no Government outlay was made on this river before the Union, for works connected with the descent of timber.

D.—The only works constructed by private parties to facilitate the passage of timber down this stream are those at the Iroquois Falls on the Vermilion River, one of its tributaries ; these works were purchased for the sum stated, in May, 1866, since which time they have been extended and improved, at a cost of $2,471.56.

E.—Total expenditure as shown by Appendix No. 1, at page 3.

OTTAWA SLIDES, &C., (SEE PAGES 503 to 507.)

* No works for the descent of timber on the Ottawa were constructed by the Government prior to the Union ; such works however were constructed at various places on the main trunk of the river and on some of its tributaries at the expense of private individuals ; and companies acting under the authority of Government licenses or otherwise, before and since the Union. They may be enumerated as follows, viz :—

A.—*At Hull.*—A slide was built in 1829 by the late Philemon Wright and was purchased by the Government in 1849, for the sum stated.

APPENDIX No. 70.—REFERENCES.—*Continued.*

B.—*At the City of Ottawa or South Chaudière.*—A slide was built here prior to the Union, by the late George Buchanan, under a Government license of occupation dated 7th Sept., 1835, and was assumed by Government after the expiry of the lease in 1845.

C.—*At the Chats Rapids.*—A crib slide was built at this place by the late George Buchanan, under a Government license of occupation dated 18th February, 1835, and was assumed by Government at the expiration of the lease in 1845.

D.—*At Portage du Fort.*—The first crib slide was erected here in 1838–39, by Mr. Hugh Bolton; it was destroyed by a freshet in the spring of 1840 and reconstructed in 1841 by Mr. Poupore, Senr., who sold it to the Government on the 16th April, 1845, for the sum stated.

E.—*At the Calumet.*—A slide was constructed at this station prior to 1843, by the late David Moore, under a license from the Government, dated 31st August, 1835. This work, which was situated in the Rocher Fendu Channel, was rendered useless by the construction of new works by Government on the opposite or north side of the Grand Calumet Island, on which account a compensation of $6,000 was granted to the heirs of the late D. Moore.

F.—*On the Madawaska River.*—The works on this tributary were commenced prior to the Union, by lumbermen, and continued afterwards by a Joint Stock Company incorporated by Act of Parliament under the name of the "Madawaska River Improvement Company," 17th December, 1853; they are located on the upper section of the river and are now in a state of disrepair.

G.—*On the Coulonge River.*—Works were built since the Union by private parties on this stream, but at what precise time, has not been ascertained; they were purchased by Government in 1867 for the sum of $4,322.18, as stated.

H.—*On the Black River.*—The works on this river were constructed towards 1837 by the late David Moore and M. Poupore, and were purchased for the sum stated.

I.—*On the Rivière du Moine.*—The first slide and booms were constructed in 1851-2, by a Joint Stock Company, incorporated on the 25th January, 1851, under the name of the "Rivière du Moine Boom and Slide Company;" these works were improved and enlarged by the Government in 1862-3. No compensation appears to have been allowed to the Company up to 30th June, 1867.

† The amounts expended by private parties and companies on these works has not been ascertained.

J.—The total amount expended on the construction of the Ottawa Slides, Dams, Piers, Booms, &c., as shown in App. No. 1, by Stat. No. 1, at page 3, amounts to... $762,769.69

This sum embraces the following items of expenditure, viz:

Construction of Slides, Dams, &c., including purchase of land and reconstruction of defective works		$719,247.13	
Damages paid in 1862-3—See App. A, Rep. Pub. Wks. for these years..		11,520.00	
Road from Portage du Fort to Calumet—See App. No. 19, page 170		23,302.56	
Bridge, Rivière aux Atocas................................	$ 500		
Do Hattfield	3,000		
Do Bonnechère	1,200		
Do Madawaska	4,000		
		$8,700.00	$762,769.69

For cost of these bridges—See App. No. 20, p. 188, 189.

APPENDIX No. 70.—REFERENCES.—*Continued.*

RIVER TRENT SLIDES, &c.

J* A dam was built at Buckhorn by private parties in 1835, the cost of which has not been ascertained; this dam was afterwards raised to a higher level by Government in 1837, and completed in 1840.

J* K*—These are the amounts for which debentures were issued and outstanding, before the Union; they are taken from a Return made to the Legislative Assembly, and dated 27th July, 1847. For particulars concerning expenditure before and since the Union, and the apportionment thereof—See remarks under Trent Navigation at the end of this Appendix.

L.—The works connected with the descent of timber at Chisholm's Rapids, Ranney's Falls, Middle Falls, Heely's Falls, and Crooks' Rapids, were placed under the management of a Company in 1854, with the power of levying tolls, excepting at Chisholm's and Crooks' Rapids where the works constructed are of greater benefit to the navigation of the River than to the descent of timber. See remarks in App. No. 15 at page 128—also App. No. 16, showing cost of repairs and management of Trent Slides under the Company from 31st Dec., 1855, to 1st January, 1867, at page 130.

M.—In Appendix No. 17, pages 156, 157, the outlay, before the Union, is shown as being $177,592.00; this sum includes $85,142.67 for Slides and $92,449.33 for Locks, as since ascertained.

N.—The expenditure since the Union, as shown in App. No. 17, at p. 156, 157, is		$459,014.05
From this must be deducted for Locks	$216,921.98	
Also do do for Bridges	13,745.02	
		230,667.00
Total charged to Trent Slides, since the Union up to the 40th June, 1867		$228,347.05

When App. No. 17 was prepared the expenditure had not been apportioned, for want of details since ascertained.

HARBORS, PIERS, &c.

The Act 16 Vic., cap. 124, of 23rd May, 1853, authorizes the formation of Joint Stock Companies for the construction of Piers, Wharves, Dry Docks and Harbors, Marine Railways, &c. Before commencing the works, the consent of the Municipality in which works proposed are to be made, is to be obtained by the Company, and they shall not take Crown property without approval of Governor in Council, nor interfere with rights or charters of other parties or companies. An Instrument is to be made and registered in the County Registrar's Office.

When such requirements have been complied with, the Company is to become and be a chartered and incorporated Company, under the name mentioned in the Instrument, to have all the powers of incorporated companies, to fix and levy tolls, but subject to the approval of the Governor in Council, and they may sell their works to Municipality.

The above Act was amended by 18 Vict., cap. 22, of 18th Dec., 1854, for the better protection of the rights of shareholders in these companies.

For Harbors sold, transferred or abandoned and no longer under the control of the Department of Public Works—See App. No. 26, pages 312 to 315.

APPENDIX No. 70.—REFERENCES.—*Continued.*

MAIN ROADS, &c., LOWER CANADA.

A.—For details of expenditure each year—See "Return of Annual Revenue and Expenditure of Lower Canada from its Constitution to the period of the Union," printed by order of the Legislative Assembly in 1867, at page 12.

B. C. D. E.—See App. N, Rep. Pub. Wks. for 1848, pages 84, 85.

F.—Appendix No. 19, pages 166 to 170, contains a list of the various roads made, improved or in progress of construction under the Department of Public Works. The total expenditure shown for Lower Canada, at page 170, is

F.—…The total expenditure shown for Lower Canada, at page 170, is	$1,033,220.98
To this amount must be added the cost of "Chemin des Caps," since ascertained	11,305.80
	1,044,526.78
Deduct "Kempt Road," constructed prior to the Union	29,064.00
Total, Lower Canada, since the Union	$1,015,462.78

G.—For details—See App. No. 19, pages 166 to 170.

H.—This amount has been deducted from the cost of roads shown in App. No. 19, and charged to Bridges.

TURNPIKE ROADS.—LOWER CANADA.

ROADS UNDER THE JURISDICTION OF THE QUEBEC TURNPIKE TRUSTEES, NORTH SHORE.

I.—The first appropriation for these roads ($16,200) was made by the Act 9 Geo. IV., cap. 17, of 14th March, 1829. The various acts respecting these roads are recited in App. No. 57, pages 437 to 440.

The Public Funds are only pledged for the Interest on the Moneys raised for these works.

J. *—This is the amount for which Debentures were issued and outstanding prior to the Union, as shown by a Return made to the Legislative Assembly, dated at Montreal, 27th July, 1847, and signed by D. Daly, Secretary.

K.—This expenditure is since the Union up to the 30th December, 1866, as shown by a Return furnished by W. Porter, Secretary to the Trustees, and dated Quebec, 10th April, 1867—[No. 85,191.]

According to this Return, the total Debt with which Government was connected on ccount of the roads constructed under the Quebec Turnpike Trustees, up to the 31st Dec., 866, was as follows, viz :

Money owing to the Government	$233,365.00
Arrears of Interest due on Debentures in the hands of Government	27,840.00
Total owing to the Government	$261,205.00
Money owing to Private Bondholders	499,128.00
Arrears of Interest due on Debentures in the hands of private Bondholders	45,316.50
Total owing to private Bondholders	$544,444.50
Total Debt with which Government is connected up to 31st Dec., 1866	$805,649.50

APPENDIX No. 70.—REFERENCES.—*Continued.*

ROADS UNDER THE JURISDICTION OF THE QUEBEC TURNPIKE TRUSTEES, SOUTH SHORE.

L.—These roads were commenced by the Trustees of the Quebec North Shore Turnpike Roads, and were placed under their control, by the Act 16 Vict., cap. 235, of 14th June, 1853.

By the Act 20th Vic., cap. 125, of 10th June, 1857, the works were placed under the control of the Quebec South Shore Turnpike Trustees.

The various Acts relating to these Roads are recited in App. No. 57, pages 439, 440. For further details—See App. No. 19, pages 176, 177.

M‡—This sum includes the expenditure under the North Shore Turnpike Trust, as shown by a Return, No. 85,191, dated and signed at Quebec, on 10th April, 1867, by W. Porter, Secretary, viz:

On the Beaumont Road	$28,450.00
Do St. Henri do	69,702.00
Do St. Nicolas do	27,826.00
	$125,978.00

The balance of expenditure up to the 30th June, 1866, according to a Return No. 85,630, dated and signed at "Pointe Lévis," by Chs. Bourget, Secretary, is as follows, viz:

On the Beaumont Road	$ 8,600.00
Do St. Henri do	10,800.00
Do St. Nicolas do	9,200.00
Do Etchemin Bridge	1,400.00
	$30,000.00

LONGUEUIL AND CHAMBLY TURNPIKE ROAD AND FERRY, FROM LONGUEUIL TO MONTREAL.

N.—By the Act 57th Geo. III, cap. 13, of 22nd March, 1817, a sum of $2,000 was appropriated to establish this road under the direction of Commissioners for the Internal Communication of the County of Kent. The subsequent Acts relating to this Road are recited in App. No. 57, pages 440, 441. This Road is now under the control of the Municipal Councils of Longueuil Village, Chambly Basin and Canton of Chambly. For further details—See App. No. 19, pages 176, 177.

O.*—This is the amount for which Debentures were issued and outstanding prior to the Union, as shown by a Return made to the Legislative Assembly, dated at Montreal, 27th July, 1847, and signed by D. Daly, Secretary. The Public Funds were only pledged for the Interest on the expenditure upon this work.

P.—Out of this amount, $16,000 were in Debentures, since the Union.

Q.—This sum is taken from pages 66, 67 of App. N, Rep. Pub. Wks. for 1848.

APPENDIX No. 70.—REFERENCES.—*Continued.*

ROADS UNDER THE JURISDICTION OF THE MONTREAL TURNPIKE TRUSTEES.

R.—The various Acts concerning these roads are recited in App. No. 57, pages 441 to 443. The first was the Act 45th, Geo. III, cap. 11, of 25th March, 1805, establishing a Turnpike for improving the road from the City of Montreal to Lachine through the forest.

The cost of construction is defraged by loans raised from various parties by the Trustees, the Government being only responsible for the payment of the Interest, if the revenue of the roads is insufficient.

For further details—See App. No. 19, pages 178, 179.

S.*—This is the amount for which Debentures were issued and oustanding up to the time of the Union, 10th Feb., 1841, according to the Return made to the Legislative Assembly, dated 27th July, 1847, before referred to. This sum also appears in the Public Accounts for the fiscal year ending 30th June, 1867.

T.—This is taken from a Return (No. 84,801) dated at Montreal, 15th March, 1867, from John Penner, Secretary; it includes a sum of $54,448.75 spent prior to the Union.

M. Penner reports that up to the 30th June, 1850, the Government had at various times advanced the Trustees funds to enable them to meet the payment of Interest ($25,837.50) on their Bonds, but that nothing has been received by the Trustees from the Government since that date. The sum of $660.94 stands at the debit of the Government for surveys for Bridges at Bout de l'Ile, leaving a Balance owing the Government of $25,176.65 up to 30th June, 1866,

U.—The following shows the cost of construction, repairs and maintenance, &c., of the various Turnpike Roads, in Lower Canada, excepting that of Longueuil and Chambly, according to the official returns noted, viz:—Nos. 85,191, 85,630, 84,801; these returns show the expenditure chiefly since the Union.

NAMES OF ROADS.	Cost of construction.	Summer and Winter repairs.	Management.	Interest paid on Debt.	Total outlay.	REMARKS.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
Quebec North Shore Turnpike Roads—Up to 31st Dec., 1866. (No. 85,191).	509,490 00	213,166 00	155,533 00	376,170 00	722,656 00	These amounts include expenses made on St. Henri, St. Nicholas and Beaumont roads, when under the jurisdiction of the North Shore Turnpike Trustees.
Quebec South Shore Turnpike Roads—Up to 30th June, 1866. (No. 85,630).	155,978 00	32,092 93	17,661 27	17,016 80	224,035 07	
Montreal Turnpike Roads —Up to 30th June, 1866. (No. 84,801)............	230,359 20	286,813 54	46,014 00	Not stated.	563,186 74	
Totals.................$	895,827 20	532,072 47	219,208 27	393,186 80	1,509,877 81	

APPENDIX No. 70.—REFERENCES.—*Continued.*

COLONIZATION ROADS—LOWER CANADA.

V.—The details in this statement respecting the Colonization Roads of Lower Canada were furnished by S. Lesage, Esq., Assistant Commissioner of Public Works and Agriculture, Province of Quebec, on 11th March, 1868, (No. 3,110).—See page 513.

MAIN ROADS AND TURNPIKE ROADS, UPPER CANADA.

A.—This road was made by Trust Commissioners, and came under the management of Government in 1846.

B.—The Trust Commissioners expended $90,697.98 on the Western Section of this road and resigned it to the Government in 1846.

C.—This road was made under Commissioners and given over to the Government in 1846. It was worn out in many places when assumed by the Government.

D.—The first 12 miles from Toronto were made under the Superintendence of Commissioners, and given over to Government in 1846.

E.—This road was improved under Commissioners, and afterwards placed under the control of Government.

F.—Part of this road was done under Trustees.

G.—Of this road 13½ miles were made by Commissioners, and assumed by Government in 1846; and 10¼ by the Board of Works. The portion made by the Board is called the Grand River Swamp Road.

H.—This was a horse railway about 17 miles in length, which was constructed under a charter granted in 1835; it was opened in 1839 between Queenstown and Chippewa, in lieu of the former "portage" occupied by the Welland Canal. The charter of this railway was amended in 1852, and the line of railway was established between Niagara on Lake Ontario, and the Falls of Niagara.

I.—Details of expenditure and construction not ascertained.

K.—See Appendix N, Rep. Pub. Wks. for 1848, pages 84, 85.

J.—For Funded Debt in Debentures on the above Roads, in Upper Canada, prior to the Union—See Return published by order of Legislative Assembly, in 1847—Also the following Acts referring to these Roads, viz:

A.—7 Will. IV, cap. 81; 2 Vic., cap. 51.
B, C, D.—3 Will. IV, cap. 38; 6 Will. IV, cap. 30; 7 Wil. IV, cap. 76.
F.—7 Will. IV, cap. 82,
G.—7 Will. IV, cap. 78.
H.—7 Will. IV, cap. 68.

* The amounts marked thus are from a Return to an Address from the Legislative Assembly showing the expenditure prior to the Union, for which Debentures were issued and outstanding, and forming a portion of the Debt of United Canada—See note at General Abstract, page 561.

APPENDIX No. 70.—REFERENCES.—*Continued.*

COLONIZATION ROADS, UPPER CANADA.

L.—This amount was furnished by A. Russell, Esq., Assist. Com. Crown Lands, Province of Ontario—See Telegrams of 12th and 13th March, 1868, (Nos. 3,108, 3,109).—See page 515.

BRIDGES, UPPER AND LOWER CANADA.

A.—The Return of Annual Revenue and Expenditure of Upper and Lower Canada prior to the Union, referred to at "Roads," gives no details of expenditure on Bridges.

B.—The expenditure since the Union, on the Bridges named in App. No. 20, is taken from the Public Works Reports; the amount entered opposite each Bridge is generally that which was expended up to the time of completion. It does not include any outlay on bridges upon Turnpike or Colonization Roads, but merely those constructed or under the control of the Department of Public Works.

C.—The number of Bridges entered for Lower Canada does not include any on Turnpike or Colonization Roads. It is greater than the number shown at I for Upper Canada, because in the latter case, the details of expenditure, and the dimensions of many of the minor bridges, have not been ascertained.

D, E, F, G, H, *.—The sums to which * is prefixed, show the amount for which Debentures were issued and outstanding up to the time of the Union as shown by the Return of the 27th July, 1847, before referred to—See Note at General Abstract, page 561.

D.—$8,000 of this amount was a Loan at 6 per cent. Interest, contracted under authority of the Act 3 Will. IV, cap. 34.

F.—$6,000	do	do	do	3 Will. IV, cap. 31.
H.—$7,436	do	do	do	7 Will. IV, cap. 83, and 3 Vic., cap. 51.

J.—The outlay since the Union on the Bridges named in Appendix No. 20, is that which was incurred by the Department of Public Works, as at B; it does not include any expenditure for Bridges on Colonization Roads.

K.—In Appendix No. 20, pages 190, 191, the total cost of construction of Bridges is shown as being..$ 489,608 16

This amount, as stated in that Appendix, is exclusive of the following amounts which have hitherto been charged to various works from which they have been deducted in the present statement, viz:—

Bridges—Lower Canada—		
Kempt and Gaspé Roads................$	17,818 21	
Metapediac Road	39,867 60	
Témiscouata do	22,580 66	
Malbaie and Grande Baie Road.......	200 00	
River Beaudet and Cascades Road....	1,062 28	
		81,528 75
Carried over......................................$		81,528 75

APPENDIX No. 70.—REFERENCES.—*Continued.*

Brought over................................$		81,528 75	
Bridges—Upper Canada—			
Rideau Bridge, Ottawa and L'Orignal Road ....$	1,200 00		
Delaware Bridge, London and Chatham Road................................	6,806 97		
Port Stanley Bridge, Port Stanley and London Road..................	1,560 00		
		9,566 97	
Bridges hitherto included in cost of Roads.....................		$91,095 72	
Rivière aux Atocas Bridge.....................	500 00		
Hattfield Bridge................................	3,000 00		
Ronnechère Bridge................................	1,200 00		
Madawaska Bridge................................	4,000 00		
Bridges hitherto included in cost of Ottawa Works..	$8,700 00		
		8,700 00	
Seymour or Campbellford Bridge...............	5,469 48		
Crooks' Bridge.	2,918 33		
Peterborough Bridge................................	7,953 15		
Indian River Bridge................................	1,200 00		
Buckhorn Bridge................................	2,025 16		
Bobcaygean Bridge................................	1,315 08		
Bridges hitherto included in cost of Trent Works ....$	20,881 20		
		20,881 20	
Total—Amount chargeable to Bridges and included under that head in present Statement................................$		120,676 92	
			120,676 92
Total cost of Bridges (See page 516)..................$			610,285 08

L.—For list of Bridges sold, transferred or abandoned by Government and no longer under the control of the Department of Public Works—See App. No. 26, pages 312 to 321.

PUBLIC BUILDINGS.

ROCKWOOD ASYLUM—KINGSTON.

The sums paid by Government, through the Finance Department, for the construction of this Asylum, as shown by the "Public Accounts" are as follow, viz :—

1859..$	2,920 81
1860..	9,860 60
1861..	25,610 32
1862..	14,874 63
1863..	14,104 47
1864..	4,671 14
1865..	22,127 55
1866..	10,648 38
1867..	23,251 83
Total..............$	$128,069 73

No details have been received respecting the outlay otherwise incurred—See page 539.

APPENDIX No. 70.—REFERENCES.—*Continued.*

PROVINCIAL LUNATIC ASYLUM, TORONTO.

The sum expended since the Union, includes :

Amount appropriated by 9 Vic. cap. 61 (1846), for completion of Asylum..$	120,000 00
Do do 12 Vic. cap. 32 (1849) do do ...	20,000 00
Construction of boundary walls in 1860–61..	13,888 73
Do of new wings (unfinished) in 1866-67..............................	65,617 55
Total......................$	219.506 28

This expenditure was provided for by Debentures issued under the Acts 9 Vic., cap. 61; 12 Vic., cap. 32; and 13-14 Vic., caps. 2 and 68. The principal and interest of these Debentures are paid out of the " Upper Canada Building Fund" arising from the proceeds of a rate or tax imposed by these Acts upon all taxable property, real or personal, in Upper Canada, for defraying the cost of the Asylum, &c. By the 20th Vic., cap. 8, the yearly tax imposed by 13 and 14 Vic., was discontinued after 1857, and instead thereof, all monies which by any Act or Law are directed to be applied or reserved for Upper Canadian purposes, and are not otherwise appropriated, are to be paid into, and form part of the " Upper Canada Building Fund."

HOSPITALS RECEIVING GRANTS FROM GOVERNMENT, 1866.*

NAMES OF BUILDINGS.	DATE OF		Nature of Governing Body.	ASSETS.				Liabilities.	Income.	Government Grant included in preceding column.	Aggregate number of days spent in the Hospital by all the patients.
	Establishment.	Incorporation.		Value of real property occupied.	Value of furniture.	Value of other property owned, investments in Funds, Stocks and other Assets.	Total Assets.				
HOSPITALS—LOWER CANADA.											
QUEBEC—											
Marine and Immigrant Hospital..........	1830	......	....	120,000 00	12,100 00	....	132,100 00	22........	22,519 42	22,087 16	27,827
Commissionners for the Relief of the indigent Sick, (Hôtel-Dieu).	......	......	Five Commissioners appointed by Government.	None. The Commissioners put out the indigent sick to be boarded and lodged.			....	....	3,191 85	3,191 85	29,345
Lying-in-Hospital (Hospice de la Maternité).	1852	1855	Ten Directors, Secrétary and Treasurer.	5,200 00	800 00	....	6,000 00	400 00	1,344 00	480 00	1,077
THREE RIVERS—											
Asylum of the Sisters of Charity	1860	......	The Sisters of Charity	2,400 00	800 00	....	(a) 3,200 00	....	1,580 97	1,540 97	10,585
The Ursuline Hospital	1697	1702	The Superioress and Council of six.	3,000 00	1,200 00	17,000 00	21,200 00	....	1,179 66	750 10	2,267
SOREL—											
General Hospital of the District of Richelieu.	1862	1860	Trustees, who give the administration to 7 Grey Nuns.	14,000 00	3,584 30	....	17,584 30	3,200 00	2,578 00	320 00	8,985
ST. HYACINTHE—											
Hôtel-Dieu Hospital	1840	1846	The Superioress and Council.	21,692 00	1,550 00	12,480 00	35,722 00	5,790 00	12,511 00	320 00	5,547
MONTREAL—											
Commissionners for the Relief of the indigent Sick, (General Hospital, Sisters of Charity).	1692	1753	Superioress and Council.	300,000 00	....	131,936 00	431,936 00	33,212 00	36,500 98	4,000 00	224,562
General Hospital	......	1823	Life Governors and 12 elected Governors.	48,000 00	8,207 00	57,700 00	113,907 00	1,197 18	16,547 07	(b) 5,501 44	35,876
St. Patrick's Hospital	1852	......	The Ladies of the Hôtel-Dieu.	Has rooms only in the Hôtel-Dieu	2,135 00	....	2,135 00	....	1,788 00	1,600 00	25,158
University Lying-in-Hospital	1843	1854	Committee of Ladies and Medical Faculty of McGill College.	....	....	800 00	800 00	....	1,446 00	480 00	2,142

Lying-in-Hospital, Sœurs de la Miséricorde.	1848	1849	Superioress and Council.	33,300 00	3,000 00	…………	36,300 00	18,287 98	11,991 24	480 00	54,392
Dispensary ………………………	1854	1854	Governor, Committee, Secretary, Treasurer and Medical Staff.	…………	400 00	…………	400 00	…………	527 00	320 00	(c) 5,112
Total—Hospitals, Lower Canada.	……	……	……………… $	547,592 00	33,776 30	219,916 00	801,284 30	62,087 16	113,705 19	41,071 52	432,875
HOSPITALS—UPPER CANADA.											
OTTAWA—											
General Hospital of the Sisters of Charity	1845	1849	Sisters of Charity……	31,920 00	2,949 59	…………	34,869 59	6,289 26	2,076 27	1,200 00	6,392
* Protestant General Hospital …………	1849	1852	A chartered Board of Trustees, 12 elected Directors and Life Directors.	15,000 00	1,125 00	3,000 00	19,125 00	…………	2,073 00	1,200 00	3,237
KINGSTON—											
General Hospital ………………………	1834	1856	Board of Governors…	25,000 00	2,000 00	1,600 00	28,600 00	1,030 00	5,584 00	4,800 00	17,701
Hôtel-Dieu Hospital, Orphanage and Asylum.	1845	……	Sisterhood of the Hospitalières of St. Joseph.	5,000 00	1,000 00	…………	6,000 00	297 71	1,751 49	800 00	Hospital 3,729 Orphanage, 11,750
TORONTO—											
General Hospital………………………	……	1847	3 Trustees named by Government, 1 by City, 1 by B. of Trade	94,090 30	6,790 26	144,632 97	245,513 53	58,000 00	(d) 20,445 07	11,200 00	33,854
Lying-in Hospital ………………………	1848	……	A Managing Committee and Trustees.	8,000 00	250 00	400 00	8,650 00	…………	1,249 47	480 00	2,548
HAMILTON—											
City Hospital………………………	……	……	Municipal Corporation assisted by the Medical Professor of the City.	5,000 00	950 00	…………	5,950 00	5,000 00	(e) 6,757 75	4,800 00	27,155
LONDON—											
City Hospital………………………	……	……	Committee of City Council.	…………	1,000 00	1,000 00	2,000 00	…………	7,749 90	(f) 2,400 00	6,386
Total—Hospitals, U. C. ………	……	……	……………… $	184,010 30	16,064 85	150,632 97	350,708 12	70,616 97	46,437 48	26,400 00	112,752
do L. C. ………	……	……	……………… $	547,592 00	33,776 30	219,916 00	801,284 30	62,087 16	113,705 19	41,071 52	432,875
Total—Hospitals, Upper and Lower Canada ………	……	……	……………… $	731,602 30	49,841 15	370,548 97	1,151,992 42	132,704 13	160,142 67	67,471 52	545,627

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* Compiled from "Miscellaneous Statistics of Canada, for the year 1866," Part I, signed by John Langton, Auditor, at Ottawa, October, 1847.

(a) The Nuns at present occupy a leased house; they are building an Asylum which would cost $2,400, when completed.

(b) Including $1,501 44 tonnage dues for 1863.

(c) This is the number of persons supplied each year with medecines and advice.

(d) Also $6,968 28 from a "Building Fund."

(e) $187,443 aid by City Corporation.

(f) $5,212 60 are paid by City Corporation.

LUNATIC ASYLUMS RECEIVING GRANTS FROM GOVERNMENT, 1866.*

NAMES OF BUILDINGS.	DATE OF		Nature of Governing Body.	ASSETS.				Liabilities.	Income.	Government Grant included in preceding column.	Aggregate number of days spent in the Asylums by all the Lunatic.
	Establishment.	Incorporation.		Value of real property occupied.	Value of furniture.	Value of other property owned, investments in Funds, Stocks and other Assets.	Total Assets.				
				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
LOWER CANADA.											
Beauport (Quebec) Asylum	1815	......	Medical Superintendents under the control of a Board of Commissioners...	275,507 00	40,000 00	....	315,507 00	....	82,420 85	82,420 85	210,209
St. John's Asylum	1851	.....	Medical Superintendents under the control of the Board of Inspectors.........	....	2,016 00	3,900 00	5,916 00	....	20,003 02	19,790 62	29,774
Total—Lunatic Asylums, L. C........	......	......	....	275,507 00	42,016 00	3,900 00	321,423 00	....	102,423 87	102,211 47	239,983
UPPER CANADA.											
Toronto Asylum (including University Branch)	1841	......	Medical Superintendents under the control of the Board of Inspectors.........	316,000 00	10,305 60	13,361 20	339,666 80	....	(a) 118,127 59	(b) 113,388 29	170,052
Orillia Asylum	1861	.....	do do ...	32,800 00	2,800 00	630 00	36,230 00	....	15,880 03	15,880 03	43,750
Malden Asylum	1859	......	do do ...	35,800 00	8,300 00	1,200 00	45,300 00	....	30,592 80	29,768 73	85,617
Total—Lunatic Asylums, U. C..........	......	......	....	384,600 00	21,405 60	15,191 20	421,196 80	....	164,600 42	159,037 05	299,419
do do L. C...........	......	......	....	275,507 00	42,016 00	3,900 00	321,423 00	....	102,423 87	102,211 47	239,983
Total—Lunatic Asylums, Upper and Lower Canada..................	......	......	....	660,107 00	63,421 60	19,091 20	742,619 80	....	267,024 29	261.248 52	539,402

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* Compiled from "Miscellaneous Statistics of Canada for the year 1866," Part I, signed by John Langton, Auditor, at Ottawa, October, 1867.

(*a*) In addition to this sum $5,789.80 was received for articles sold.

(*b*) Including $41,000 in building account.

ASYLUMS AND CHARITABLE INSTITUTIONS RECEIVING AID FROM THE PROVINCE, 1866.*

NAMES OF BUILDINGS.	DATE OF Establishment.	DATE OF Incorporation.	Nature of Governing Body.	ASSETS. Value of real property occupied.	ASSETS. Value of furniture.	ASSETS. Value of other property owned, investments in Funds, Stocks and other Assets.	ASSETS. Total Assets.	Liabilities.	Income.	Government Grant included in preceding column.	Aggregate number of days spent in the Asylum by all the patients.
LOWER CANADA.				$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
QUEBEC—											
Asylum of the Good Shepherd, for the reformation of repentant females......	1850	1855	A Board of Directors..	54,597 00	2,000 00	....	56,597 00	11,117 00	20,148 00	640 00	32,959
St. Bridget's Asylum for the maintenance of friendless old women and orphans..	1856	1860	Elective Committee of 18	11,289 00	700 00	3,650 00	15,639 00	....	4,828 70	320 00	23,064
Charitable Society of Roman Catholic Ladies for the care of orphans (a)......	......	1842	A Committee of Ladies	....	....	....	....	....	908 00	428 00	34,132
Church of England Male Orphan Asylum	1832	1857	Rector and Churchwardens, Parish of Quebec	....	600 00	10,000 00	10,600 00	....	1,705 00	320 00	6,947
(b) Church of England Female Orphan Asylum........................	1828	1861	Board of 12 Ladies ...	....	800 00	23,430 00	24,230 00	....	(c)1,739 00	....	4,888
Finlay Asylum, Church of England Home for the aged and helpless poor...........	1862	1857	Rector and Churchwardens, Parish of Quebec	20,000 00	820 00	1,240 00	22,060 00	3,125 00	2,666 51	320 00	9,902
Ladies' Protestant Home, for unprotected women and children................	1855	1859	....	16,000 00	1,000 00	5,530 00	22,530 00	5,200 00	4,018 11	320 00	11,560
Canada Military Asylum......	1815	1853	Committee of Military Officers, Clergy and Civilians..............	8,000 00	500 00	....	8,500 00	740 00	4,086 00	160 00	3,099
Carried over......	.....	......	....	109,886 00	6,420 00	43,850 00	160,158 00	20,182 00	40,099 32	2,508 00	126,551

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* Compiled from "Miscellaneous Statistics of Canada for the year 1866," Part I, signed by John Langton, Auditor, at Ottawa, October, 1867.

(a) This Society hands over its Funds to the Sisters of Charity, who maintain an orphanage therewith.

(b) This institution designs to build an Asylum.

(c) Government Grant not received within the year.

ASYLUMS AND CHARITABLE INSTITUTIONS, &c.—*Continued.*

NAMES OF BUILDINGS.	DATE OF		Nature of Governing Body.	ASSETS.				Liabilities.	Income.	Government Grant included in preceding column.	Aggregate number of days spent in the Hospital by all the patients.
	Established.	Incorporation.		Value of real property occupied.	Value of furniture.	Value of other property owned, investments in Funds, Stocks and other Assets.	Total. Assets.				
LOWER CANADA.—*Continued.* *Brougth over*.....	.....	......	....	$ cts. 109,836 00	$ cts. 6,420 00	$ cts. 43,850 00	$ cts. 160,156 00	$ cts. 20,182 00	$ cts. 40,099 32	$ cts. 2,508 00	126,551
MONTREAL—											
Asile de la Providence, for the relief of the sick and poor.	1843	1841	Sisters of Providence..	22,160 00	....	....	22,160 00	40,287 82	19,317 21	1,120 00	81,318
Asylum of St. Vincent de Paul, for the education of poor children between 5 and 7 years old.	1860	......	do ...	....	....	....	....	60 00	1,193 25	430 00	89,150
Bonaventure Street Asylum. The education of children, with the special object of enabling mothers to gain their living more easily.	1858	1753	Sisters of Charity, under the direction of Rev. V. Rousselot	16,000 00	1,200 00	....	17,200 00	2,650 00	1,917 00	430 00	128,681
Asile Nazareth. An orphan institution and an institution for the blind.	1861	1753	do ...	43,200 00	1,375 00	....	44,575 00	8,200 00	4,048 00	430 00	(a)87,357
Charitable Society of Roman Catholic Ladies. An orphan Asylum.	1832	1841	....	....	....	325 41	325 41	....	2,703 15	680 00	9,000
St. Patrick's Orphan Asylum. For the maintenance of destitute Irish Orphans	1851	1855	Director and Trustees.	28,200 00	6,000 00	7,800 00	42,000 00	....	8,971 73	640 00	87,248
Protestant Orphan Asylum....................	1822	1843 and 1860	A large body of Directresses.	9,089 92	400 00	10,335 40	19,825 32	....	2,450 59	640 00	12,958
Ladies' Benevolent Society and House of Refuge.	1832	1841	Two Directresses and a Committee of 50 Ladies.	12,000 00	400 00	5,236 38	17,686 38	....	3,991 48	800 00	42,458
Magdalen Asylum, Bon Pasteur	1844	1846	Superior and Council.	46,000 00	3,052 00	2,320 00	51,372 00	7,950 00	8,523 00	320 00	42,975
Home and School of Industry...............	1847	.....	....	....	400 00	....	400 00	....	1,244 28	320 00	10,950
Deaf and Dumb Institution...... Males......................	1848	......	The Regular Clergy of St. Viateur.	12,000 00	958 90	60 00	13,018 90	2,210 66	4,462 29	1,500 00	11,470
Deaf and Dumb Institution...... Females	1851	......	....	32,000 00	200 00	....	32,200 00	1,100 00	2,981 00	1,500 00	(b)30,000
Total—Asylums and Miscellaneous Charitable Institutions, Lower Canada.....	......	... ..	....$	330,535 92	20,405 90	69,977 19	420,919 01	82,640 48	101,902 30	11,318 00	760,116

UPPER CANADA.											
Kingston—											
Asylum for the Relief of the Indigent Sick. (House of Industry).	1847	.....	Mayor, 3 members of Corporation and 8 Citizens chosen annually.	4,000 00	650 00	....	4,650 00	....	2,693 96	2,400 00	16,794
Orphan's Home and Female Aid Society.	1857	1862	Committee of Ladies of Protestant Denominations.	6,000 00	300 00	3,879 00	10,179 00	....	1,904 16	640 00	16,898
Toronto—											
House of Providence	1857	......	Sisters of St. Joseph under control of R. C. Bishop.	25,736 00	3,500 00	....	29,236 00	2,000 00	4,693 03	320 00	42,363
Orphan's Home and Female Aid Society.	1849	1850	Twenty-four Directors	6,000 00	400 00	7,000 00	13,400 00	....	5,134 94	640 00	21,939
Girls' Home and Public Nursery for Children.	1857	1863	3 Directress, Secret'ry, Tres., &c., 27 Managers elected annually.	....	100 00	5,264 64	5,364 64	....	1,350 57	320 00	10,762
House of Industry for the Relief of the Indigent Poor.	1836	......	15 Trustees and 25 Managers.	12,000 00	1,200 00	5,000 00	18,200 00	....	(c)9,255 71	2,400 00	38,300
R. C. Orphan Asylum	1852	1855	Sisters of St. Joseph under control of Bishop.	10,000 00	2,800 00	....	12,800 00	800 00	5,295 84	640 00	86,792
Magdalen Asylum	1854	1858	4 Directress & a Committee of 29.	6,000 00	800 00	....	6,800 00	....	2,257 56	480 00	12,955
Hamilton—											
Deaf and Dumb and Blind Institution.	1858	......	A Board of Directors..	....	2,240 00	640 00	2,880 00	550 00	8,434 45	3,000 00	16,841
Protestant Orphan Asylum and Ladies Benevolent Society.	1846	1852	7 Trustees and 15 Ladies.	5,000 00	280 00	....	5,280 00	....	d) 3,149 60	640 00	13,100
R. C. Orphan Asylum	1852	.....	Sisters of St. Joseph...	12,000 00	1,100 00	....	13,100 00	....	3,279 68	640 00	33,165
Total.—Asylums and Miscellaneous Charitable Institutions, U. C.	......	......	..............................$	86,736 00	13,370 00	21,783 64	121,889 64	3,350 00	47,449 50	12,120 00	309,909
Total.—Asylums do do L. C......	......	......	..............................$	330,535 92	20,405 90	69,977 19	420,919 01	82,640 48	101,902 30	11,310 00	760,116
Total.— do do L. C. & U. C.	......	......	..............................$	417,271 92	33,775 90	91,760 83	542,808 65	85,990 48	149,351 80	23,430 00	1,070,025

(a) Sundry other persons than orphans have been admitted into the institution, and maintained 9,320 days.
(b) Estimate.
(c) Including Corporation Grant, $4,000.
(d) Including $610 from the City Council.

GENERAL ABSTRACT—HOSPITALS, ASYLUMS AND CHARITIES.

WORKS.	Assets.				Liabilities.	Income.	Government grant included in preceding column.	Aggregate number of days spent in the Hospitals or Asylums by all the patients.
	Value of real property occupied.	Value of furniture.	Value of other property owned, investments in Funds, Stock and other Assets.	Total Assets.				
LOWER CANADA.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	
Hospitals	547,592 00	33,776 30	219,916 00	801,284 30	62,087 16	113,705 19	41,071 52	432,875
Lunatic Asylums	275,507 00	42,016 00	3,900 00	321,423 00	....	102,423 87	102,211 47	239,983
Asylums and Charitable Institutions	330,535 92	20,405 90	69,977 19	420,919 01	82,640 48	101,902 30	11,318 00	760,116
Total—Lower Canada ......$	1,153,634 92	96,198 20	293,793 19	1,543,626 31	144,727 64	318,031 36	154,600 99	1,432,974
UPPER CANADA.								
Hospitals	184,010 30	16,064 85	150,632 97	350,708 12	70,616 97	46,437 48	26,400 00	112,752
Lunatic Asylums	384,600 00	21,405 60	15,191 20	421,196 80	....	164,600 42	159,037 05	299,419
Asylums and Charities	86,736 00	13,370 00	21,783 64	121,889 64	3,350 00	47,449 50	12,120 00	309,909
Total—Upper Canada ......$	655,346 30	50,840 45	187,607 81	893,794 56	73,966 97	258,487 40	197,557 05	722,080
Total—Lower and Upper Canada ......$	1,808,981 22	147,038 65	481,401 00	2,437,420 87	218,694 61	576,518 76	352,158 04	2,155,054

APPENDIX No. 70.—*Continued.*

PROVINCIAL PENITENTIARY, KINGSTON.

The expenditure chargeable to construction is not shown in the " Public Accounts" from 1841 to 1857.

The sums paid by Government since the Union, for the construction of these buildings, as shown by the " Public Accounts " are as follow :—

1857	$	16,941 08
1858		599 22
1859		8,688 61
1860		9,632 51
1861		10,715 18
1862		9,139 09
1863		7,999 04
1864		3,849 99
1865		6,443 03
1866		3,382 28
1867		5,096 80
Total	$	82,486 83

COURT HOUSES AND JAILS—UPPER CANADA—(SEE PAGE 542.)

The Act of the Provincial Parliament of Upper Canada, 32 Geo. III, cap. 8, (1792) enacts that Jails and Court Houses shall be built in each District, (Upper Canada was then divided into Districts and has been so divided up to 1849, when it was divided into Counties by the Act 12 Vic., cap. 78 of 1849) and empowers the Magistrates or Justices of the Peace to levy rates or assessments for this purpose.

By the Act 55, Geo. III, cap. 8, (1815) certain sums were granted by Government for Building Jails in the following Districts, viz : £2,000 for each of the Districts of Western, Niagara and London ; the same Act enacts how the monies thereby granted shall be paid and accounted for.

In 1850 the Upper Canada Building Fund was established by the Act 13, 14 Vic., cap. 68, for defraying the cost of Public Buildings ; a portion of this Fund is granted to the Municipalities as an aid towards the construction of Court Houses and Jails in the said Province.

Various other Acts applicable to the same and other purposes, have been enacted from time to time but are too lengthy to be recited here.—See Acts 34, Geo. III, cap. 10, 1794 ; 4 Geo. IV, cap. 8, 1824 ; 7 Will. IV, cap. 30, 1837 ; 2 Vic., cap. 11, 1839 ; 2 Vic., cap. 29, 1839 ; 9 Vic., cap. 65, 1846 ; 12 Vic., cap. 78, 1849 ; 16 Vic., cap. 22, 1852 ; 18 Vic., cap. 13 ; 1854 ; 18 Vic., cap. 103, 1855 ; Granting to Upper Canada an equivalent to the $600,000 granted to Lower Canada by Seigniorial Act of 18 Vic., cap. 3 of 1854 for local purposes ; 20 Vic., cap. 8, 1857, constituting this equivalent a portion of the Upper Canada Building Fund. 20 Vic., cap. 28, sec. 26 ; 1857 ; 22 Vic., cap. 79, sec. 14, 1858 ; 22 Vic., cap. 37, 1859 ; cap. 54 of Consol. Stat. for Upper Canada, sect. 247 and 263 of 1859 ; cap. 72 of Consol. Stat. for Upper Canada, sect. 15 of 1859.

APPENDIX No. 70.—REFERENCES.—*Continued.*

COURT HOUSES AND JAILS IN UPPER CANADA—(SEE PAGE 542).—*Continued.*

	Counties for which Court Houses and Jails have been erected.	Situation of Counties.	Towns, &c., where Court Houses and Jails are situated.	Amount paid by Government out of "Upper Canada Building Fund," from 1861, to 1st July, 1867, according to Public Accounts.	When paid.	REMARKS.
				$ cts.		
1	Glengary, Stormont & Dundas.	On the St. Lawrence	Cornwall	......	......	One building.
2	Leeds and Grenville	do	Brockville	2,336 25	1863-64.	One building.
3	Frontenac	Foot of Lake Ontario	Kingston	2,000 00	1867.	Paid out of the $6,000 appropriated in 1866. Two buildings. According to a return dated 8th April, 1868, the Court House and Jail at Kingston were constructed in 1855-56. Cost of Jail, 28,000. Cost of Court House, $72,000, including furniture. Government in exchange for the old Court House at Kingston paid the Counties of Frontenac, Lenox and Addington, a sum of $16,000.
4	Prescott and part of Russell	On the Ottawa	L'Orignal	6,000 00	1862.	One building.
5	Carleton and part of Russell	do	Ottawa	6,000 00	1861.	Two buildings.
6	Lanark	At rear of Leeds & Grenville	Perth	4,786 50	1862.	Two buildings.
7	Renfrew	On the Ottawa				
8	Addington	Betw. L. Ontario & the Ottawa	Napanee	......	......	Two buildings, constructed in 1864. Cost of Jail $15,000, cost of Court House $20,000.
9	Lenox	Bay of Quinté				
10	Prince Edward	Between Bay of Quinté and Lake Ontario	Picton	1,420 00	1867.	Not ascertained.
11	Hastings	On Bay of Quinté	Belleville	4,737 50	1867.	
12	Northumberland and Durham	On Lake Ontario	Cobourg	6,000 00	From 1861 to '63.	
13	Peterborough	At rear of Northumberland	Peterborough	6,000 00	1865.	
14	Victoria	At rear of Durham	Lindsay	......	......	
15	Ontario	Betw. Lakes Ontario & Simcoe	Whitby	4,117 90	1861.	
16	York	do	Toronto	24,000 00	1861-63.	
17	Peel	On Lake Ontario				
18	Simcoe	Between Lake Simcoe and Georgian Bay	Barrie	6,000 00	1863-64.	
19	Halton	On Lake Ontario	Milton	......	......	
20	Wentworth	do	Hamilton	......	......	One building with a wing. Main building erected about 1827, at a cost of $30,812. Wing built in 1853, at a cost of $30,000. Buildings used by County of Wentworth and City of Hamilton.

21	Lincoln	On Lake Ontario	St. Catharines			$8,000 were appropriated by 55 Geo. III, cap. 8 (1815), for the erection of a Jail for the Counties of Lincoln, Welland and Haldimand. $6,000 were appropriated in 1866. No portion of this amount appears to have been expended. The present Court House and Jail, which are separate buildings; were constructed in 1866,—the former at a cost of $15,000 and the latter at a cost of $32,500. The Court House appears to have been erected chiefly at the expense of the Town of St. Catharines and the Jail at the expense of the County of Lincoln.
22	Welland	On Lake Erie	Welland			
23	Haldimand	do	Cayuga			
24	Norfolk	do	Simcoe	3,718 97	1861-62 and '67.	
25	Brant	At rear of Wentworth, Haldimand and Norfolk	Brantford	6,000 00	1861-62-63.	
26	Wellington	At rear of Wentworth and Halton	Guelph	6,000 00	1861.	
27	Waterloo	At rear of Brant and Oxford.	Berlin	3,387 58	1862.	
28	Oxford	At rear of Norfolk and Elgin	Woodstock	3,767 50	1862-63.	
29	Elgin	On Lake Erie	St. Thomas			$8,000 were appropriated in 1815 (55 Geo. III, cap. 8), for the erection of a Jail for these two Counties which were then comprised in the "*District of London.*"
30	Middlesex	At rear of Elgin	London	3,663 53	1861-62-63-67.	
31	Kent	On Lake Erie and adjoining Westward partly to Lake Ste. Claire	Chatham	3,034 15	1861.	$8,000 were appropriated by 55 Geo. III, cap. 8, (1815) for the erection of a Jail for these two Counties then the "*Western District.*"
32	Essex	Between Lake Erie, River Detroit & Lake Ste. Claire	Sandwich			
33	Lambton	At foot of Lake Huron	Sarnia	6,000 00	1861-62.	
34	Huron and Bruce	On Lake Huron	Goderich	6,000 00	1861-62.	
35	Perth	Between Huron, Oxford, Waterloo and Wellington	Stratford	1,213 52	1863.	
36	Grey	On Georgian Bay	Owen Sound			
37	Manitoulin Island	Head of Lake Huron				$5,000 were appropriated in 1866, for the erection of a Jail here. See "*Public Accounts*" of 1867, part II, page 97.
38	District of Algoma	Foot of Lake Superior	Sault Ste. Marie	See Appendix No.	70, at page 542.	
			$	116,183 40		

APPENDIX No. 70.—REFERENCES.—*Continued.*

UNIVERSITIES, COLLEGES, GRAMMAR SCHOOLS, AND COMMON SCHOOLS—(SEE PAGES 542, 543)

Land has been granted for educational purposes in Lower and Upper Canada, by the Imperial and Provincial Governments, both before and since the Union.

The quantity of land granted by Government for the support of Common Schools in Lower Canada is about 500,000 acres.

In Upper Canada the quantity granted for the support of Universities, Colleges, Grammar Schools and Common Schools is about 1,170,600 acres.

The value of the lands granted and of the buildings erected for educational purposes has not been ascertained with sufficient accuracy to enter the same in the preceding statement of Provincial Works.

The Act 19, 20 Vic. cap. 54 of 1856–57 constitutes a Fund called the "Lower Canada Superior Education Investment Fund," as an aid for Superior Education and Normal and Common Schools in Lower Canada. This Fund is composed of the revenue arising from the Estates belonging formerly to the Order of the Jesuits.

For Upper Canada—See Sect. 120, cap. 64, Cons. Stat. for U. C.

The Act 12 Vict. cap. 200, of 1849, enacts that monies arising from the sale of Public Lands shall be set apart for School purposes until they produce an income of £100,000 a year. *One million of acres of Public Lands* are set apart to form a fund for Common Schools in the Province of Canada. This annual grant to cease when this fund amounts to £50,000 a year, Government making up the deficiency in case the fund should fall short of £50,000, in any year. One half of the land granted appears to be for Lower and the other for Upper Canada.

PROVINCIAL VESSELS:

LA CANADIENNE.

Rigged Schooner propelled by Sails—(*see page* 547.)

By the Act 18 Vic., cap. 4 of 18 Dec., 1854, being the Supply and Loan Act for the year 1854, a sum of £2,000cy. was appropriated for the construction or purchase of a Steamer for the protection of the Gulf Fisheries of the St. Lawrence.

This sum being insufficient for the construction of a Steamer of the class required, it was decided to construct a fast sailing schooner. After the usual tenders were called for, that of Mr. T. C. Lee was accepted in February, 1855. The Amount paid him was £2,927 9 9 ($11,709 95.)

A further sum of £270 12 5 ($1,082 48) was spent for the fitting up of the Vessel and other contingencies.

By a declaration of Ownership dated 20 April, 1866 signed by the Com. of P. W. La Canadienne is described as being British Built on 5th June, 1855.

By a Certificate of Registry dated 20 April, 1866, signed by Neilson Ross, Acting Registrar, the Schooner is described as being of the following dimensions.

Length from the forepart of stem under the bowsprit to the aft side of the head of the Sternpost	92 Feet $\frac{1}{10}$
Main breadth to outside plank	23 do $\frac{7}{10}$
Depth in hold from Tonnage Deck to Ceiling at Midships	10 do $\frac{1}{10}$

Name and Address of Builder, T. C. Lee, Quebec.

	No. of Tons.
Tonnage under Tonnage Deck or Total Register Tonnage	100.75

P. FORTIN,
Master of said Schooner.

APPENDIX No. 70.—REFERENCES.—*Continued.*

STATEMENT in No. 46733, showing the Horse Power, Draught of Water, Tonnage and Dimensions of the Screw Steamers "Napoleon III," "Queen Victoria," and "Lady Head," and of the Paddle Steamers "Advance" and "Admiral." (See pages 547 to 549.)

NAME OF STEAMER.	When, where and by whom built.	Built of.	Nominal Horse Power.	Effective Horse Power.	Draught of water when light.	Draught of water with full cargo.	Gross Tonnage.	Tonnage, less space for Machinery.	Length over all.	Depth of Hold.	Breadth.	Diameter of Cylinder.	Length of Stroke.	Description of Engines.	Number of Boilers	Dimension of Boilers.	Description of Boilers.
Napoleon III.	In the Clyde, by Napier and Sons, in 1856.	Iron...	300	750	ft. 14½	ft. 16	495	212	ft. 173	ft. 16	ft. 30	in. 60	ft. in. 4 6	Oscillating and Geard.	2	10 ft. 8 in. long, 14 ft. 6 in. broad and 17 ft. high.	Tubular.
Queen Victoria.	In the Clyde, by Napier and Sons, in 1856.	Iron...	300	750	14½	16	495	212	173	16	30	60	4 6	Oscillating and Geard.	2	10 ft. 8 in. long, 14 ft. 6 in. broad and17 ft. high.	Tubular.
Lady Head.	In the Clyde, by Napier and Sons in 1857.	Iron...	150	250	11½	13	299	168	151	13	24	40	3 6	Oscillating and Geard.	1	10 ft. 8 in. long, 15 ft. 5 in. broad and 15 ft. 11 in. high.	Tubular.
Advance.	Quebec, by P. Wilson, 1855.	Wood.	90	175	7	8	373	235	164	11	26	45	10 ft., 5 ft. crank.	Walking Beam Engine	2	28 ft. 4 in. long. 9 ft. 5 in. broad and 7 ft. 4 in. high.	Boilers with Flues.
Admiral.	Niagara, by Niagara and Harbor Dock Company.	Wood.	72	125	7	8½	289	110	155	10	20	42	8 ft., 4 ft. crank.	Walking Beam Engine	2	25 ft. long, 8 ft. broad and 8 ft. high.	Boilers with Flues.

"Napoleon III."
"Queen Victoria." } Full Speed, 13 knots, Consume 24 chalds. of Coal each per 24 hours.

APPENDIX No. 70.—REFERENCES.—*Continued.*

Replies in No. 46,733 to questions contained in letters from T. Trudeau, Esquire, Secretary Department, of Public Works, dated 25th April, 1860, concerning the Provincial Tug Steamers, Napoleon III, Queen Victoria, Advance and Admiral, and S. S. Lady Head.

S. S. NAPOLEON III.

Where built	In the Clyde.
Built by	R. Napier and sons.
Built of	Iron.
Thickness of plates	Keel streak $\frac{7}{8}$ inc. turn of Bildge $\frac{3}{4}$ inc. light water line $\frac{5}{8}$ inc. and above that $\frac{1}{2}$ inc.
Diameter of cylinder	Sixty inches.
Length of stroke	Four feet six inches.
Description of engines	Oscillating and geard.
Number of boilers	Two.
Dimensions of same	10 feet 8 inc. long ; 14 feet 6 inc. broad and 17 feet high.
Description of same	Tubular.
Thickness of boiler plate	$\frac{1}{2}$ inc. and $\frac{3}{8}$ inc.
Diameter and pitch of screws	Diameter 10 feet 6 inc ; pitch 18 feet.

S. S. Queen Victoria is in every respect similar to the S. S. Napoleon III.

S. S. LADY HEAD.

Where built	In the Clyde.
Built by	R. Napier and sons.
Built of	Iron.
Thickness of plates	Keel streak $\frac{5}{8}$ inch and above that $\frac{1}{2}$ inch.
Diameter of cylinder	Forty inches.
Length of stroke	Three feet six inches.
Description of engine	Oscillating and Geard.
Number of boilers	One.
Description of same	Tubular.
Dimensions of same	10 feet 8 inches long, 15 feet 5 inc. broad and 15 feet 11 inches high.
Thickness of boiler plate	$\frac{1}{2}$ inch and $\frac{3}{8}$ inch.
Diameter and pitch of screw	Diameter 8 feet, pitch 12 feet.

P. S. ADVANCE.

Where built	Quebec.
Built by	J. Wilson.
Built of	Wood.
Diameter of cylinder	Forty five inches.
Length of stroke	Ten feet, five feet crank .
Description of engine	Walking beam engine.
Number of boilers	Two.
Description of same	Boilers with flues.
Dimensions of same	28 feet 4 inc. long, 9 feet 5 inc. broad and 7 feet 4 inches high.
Thickness of boiler plate	7-16 inch.
Dimensions of paddle wheels	Diameter 27 feet, breadth 6 feet.

APPENDIX No. 70.—REFERENCES.—*Continued.*

P. S. ADMIRAL.

Where built	Niagara.
By whom	Niagara and Harbor Dock Company.
Built of	Wood.
Diameter of cylinder	Forty two inches.
Length of stroke	Eight feet, four feet crank.
Description of engine	Walking beam engine.
Number of boilers	Two.
Description of same	Boilers with flues.
Dimensions of same	25 feet long, 8 feet broad and 8 feet high.
Thickness of boiler plate	7-16 inch.
Dimensions of paddle wheels	Diameter 25 feet, breadth 6 feet.

F. BUTEAU,
Agent, P. T. S.

Quebec, 30th April, 1860.

RAILWAYS.

GRAND TRUNK RAILWAY COMPANY—(SEE PAGES 552, 554.)

A.—The Government Loan, according to a return dated Montreal 8th March, 1861, and signed by Joseph Elliott, Secretary and Treasurer, is subdivided as follows, viz:

Provincial Debentures issued in favor of St. Lawrence and Atlantic Railway	$2,275,166 67
Quebec and Richmond Railway	1,216,666 67
Grand Trunk Railway	11,650,800 00
Total Provincial Debentures issued	$15,142,633 34

These Debentures bear 6 per cent interest, payable after 6 per cent has been realized on the capital stock of the Company.

The interest accrued on these Debentures up to 1st July, 1867, according to the Public Accounts of the same year, is as follows, viz:

Interest Account—special	$ 7,302 18
Interest Account	10,457,458 01
Total Interest accrued	$10,464,760 19
Total Debt to Government on 1st July, 1867	$25,607,393 53

GREAT WESTERN RAILWAY COMPANY—(SEE PAGES 553, 555.)

B.—The Debt of this Railway to the Government on 1st July, 1867, as shown by the Public Accounts, comprises the following sums, viz:

Government Loans, Debentures account	$2,810,500 00
Interest do	1,130,747 50
Total Debt to Government on 1st July, 1867	$3,941,247 50

APPENDIX No. 70.—REFERENCES.—*Continued.*

NORTHERN RAILWAY COMPANY—(SEE PAGES 553, 555.)

C.—On 1st July, 1867, the Debt of this Railway to the Government, as shown by the Public Accounts, is as follows, viz:—

Government Loan, Debenture account..........................	$ 2,311,666 67
Interest do	1,433,760 23
Do do Special	30,976 70
Total Debt to Government on 1st July, 1867....................	$ 3,776,403 60

A. B. C.—The following is a summary showing the total amount due by Railway Companies to Government for Loans and Interest thereon, up to 1st July, 1867, viz:

NAME OF RAILWAY COMPANY.	Loans Debenture account.	Interest account.	Special Interest account	Total Debt.
	$ cts.	$ cts.	$ cts.	$ cts.
Grand Trunk....................................	15,142,633 34	10,457,458 01	7,302 18	25,607,393 53
Great Western..................................	2,810,500 00	1,130,747 50	....	3,941,247 50
Northern Railway.................	2,311,666 67	1,433,760 23	30,976 70	3,776,403 60
Total Debt to Government on 1st July 1867..........	20,264,800 01	13,021,965 74	38,278 88	33,325,044 63

APPENDIX No. 70.—REFERENCES.—*Continued.*

RAILWAYS CONSTRUCTED IN LOWER AND UPPER CANADA.

STATEMENT showing the corporate name of each Railway, the name, length, and date of opening of each Section of Railway. —(See pages 552 to 555.)

No. of R. p. R. C. Rep. for 1859-60.	CORPORATE NAME OF RAILWAY.	NAME OF SECTION.	Date of Opening.	Length of Section in Miles.	TOTAL LENGTH.	REMARKS.
	LOWER CANADA.					
2	Grand Trunk	Main Line—Rivière-du-Loup to St. Paschal.	2 July, 1860...	26.00		
	do	do St. Paschal to St. Thomas	31 Dec., 1859...	53.00		
	do	do St. Thomas to Chaudière Curve.	23 Dec., 1855...	39.50		
		Total—Rivière-du-Loup to Chaudière Curve		118.50		
	do	Main Line—Pointe Lévis opposite Quebec to Richmond.	27 Nov., 1854...	96.00		
	do	do Richmond to St. Hyacinthe	— Aug., 1852...	41.00		
	do	do St. Hyacinthe to Montreal	Spring, 1847...	35.00		
	do	do Victoria Bridge and Approaches	16 Dec., 1859...			The length of this section (6 miles) is included in preceding one.
		Total—Pointe Lévis to Montreal...		172.00		
	do	do Richmond to Sherbrooke	— Aug., 1852...	25.00		
	do	do Sherbrooke to Boundary Line...	— July, 1853...	30.00		Boundary Line between Canada and the State of New Hampshire.
		Total—Portion of Main Line leading to Portland, State of Maine...		55.00		
	do	do Montreal to Boundary Line between L. C. and U. C.	19 Nov., 1855...	44.00		This Section is a part of the Montreal and Brockville Section.
	do	Branch—Arthabaska to Doucet's Landing...	Autumn, 1864...	35.00		At Doucet's Landing their is a Ferry to Three Rivers.
		Total—Grand Trunk, L. C.		424.50	424.50	Under one management together with portion in U. C.
11	St. Lawrence and Industry	Main Line—St. Lawrence and Industry	— May., 1859...	12.00	12.00	From Lanoraie on the St. Lawrence, westward to Village of "Industrie."
15	Stanstead, Shefford and Chambly	do St. John's to West Farnham	1 Jan., 1859...	13.00		Across the Richelieu into the Eastern Townships.
	do do do	do West Farnham to Granby...	31 Dec., 1859...	15.00		
	do do do	do Granby to Waterloo	— June, 1660...	15.00	43.00	Worked by the Vermont Central R. R.

APPENDIX No. 70.—REFERENCES.—*Continued.*

RAILWAYS CONSTRUCTED IN LOWER AND UPPER CANADA.—*Continued.*

No. of R.p.R.C. Rep. for 1859-60	CORPORATE NAME OF RAILWAY.	NAME OF SECTION.	Date of Opening.	Length of Section in Miles.	TOTAL LENGTH.	REMARKS.
	LOWER CANADA—*Continued.*					
9	Montreal and Champlain	Main Line—Montreal to Lachine	— Nov., 1847...	8.00	....	Ferry from Lachine to Caughnawaga, on opposite side of St. Lawrence.
	do do	do Caughnawaga to Province Line.	— Aug., 1852...	32.00	....	Boundary Line between Canada and State of New York. Towards Moer's Jonction.
		Total—Montreal to P. L. *via* Lachine	....	40,00		
	do do	Main Line—St. Lambert to St. John's	— Jan., 1852...	21,00	....	Old portion on Laprairie and St. John R. R. opened July, 1836.
	do do	do St. John's to Rouse's Point	— Aug., 1851...	22,00		
		Total—Montreal to Rouse's Point, exclusive of portion included in G.T.R.	....	43,00	....	Total distance from Montreal to Rouse's Point by the line is 48.76 miles.
		Total—Montreal and Champlain	....	83.00	83.00	
10	Carillon and Grenville	Main Line—Carillon and Grenville	— Oct., 1854...	12.75	12.75	On north side of the River Ottawa.
		Total—Railways, Lower Canada	....	....	575.25	
	UPPER CANADA.					
2	Grand Trunk do	Main Line—Boundary Line between L. and U. Canada to Brockville	19 Nov., 1855...	81.00		
	do	do Brockville to Oshawa	27 Oct., 1856...	175.00		
	do	do Oshawa to Toronto	— Aug., 1856...	33.00		
		Total—Boundary Line to Toronto	....	289.00		
	do	Main Line—Toronto to Guelph	— July, 1856...	48.00		
	do	do Guelph to Stratford	17 Nov., 1856...	40.00		
	do	do Stratford to St. Mary's "Junction"	27 Sept., 1858...	10.00		
	do	do St. Mary's to London "Branch"	27 Sept., 1858...	22.00		
	do	do St. Mary's to Sarnia	21 Nov., 1859...	70.00		
		Total—Toronto to Sarnia, at foot of Lake Huron	....	190.00	....	Including 22 miles for Branch to London. Railway continues from Port Huron, opposite Sarnia to Detroit, a distance of 62 miles on U. States Territory; was opened on 21st Nov.'59.
	do	Branch—Kingston	10 Nov., 1860...	2.00		
		Total—Grand Trunk U. C.	....	481.00	481.00	Under one Management.

8	Ottawa and Prescott	Main Line—Ottawa and Prescott	— Dec., 1854	54.00	54.00	From Prescott on the St. Lawrence to Ottawa City.
14	Brockville and Ottawa	do Tunnel from Temporary Station to Harbor	31 Dec., 1860	0.75		
	do do	do Brockville to Almonte	17 Feb. 22 Aug. 59	51.25		
	do do	do Almonte to Sand Point		22.50		
	do do	Branch—Smith's Falls to Perth	17 Feb. 1859	12.00	86.50	From St. Lawrence towards Pembroke on the Ottawa.
6	Cobourg and Peterborough	Main Line—Cobourg and Peterborough	— May 1854	28.00	28.00	Lake Ontario to Peterborough.
16	Peterborough and Chemung Lake	do Peterborough & Chemung Lake	6 July 1859	4.00	4.00	Peterborough to Saw Mills.
12	Port Hope, Lindsay & Beaverton	do Port Hope to Lindsay	30 Dec., 1857	43.00		
	do do do	Branch—Millbrook to Peterborough	18 Aug., 1858	13.50	56.50	From Lake Ontario—North.
3	Northern	Main Line—Toronto to Bradford	13 June 1853	41.00		From Toronto to Lake Huron. The total length is marked 95.14 in Rep. R. Com. for 1859-60; 96.75 in Miscellaneous Statistics for 1866; and 94.00 in Railway Time Tables for 1868.
	do	do Bradford to Barrie	11 Oct., 1853	21.00		
	do	do Barrie to Collingwood	2 Jan., 1855	32.14	94.14	
7	Erie and Ontario	do Erie and Ontario	3 July 1854	17.00	17.00	From L. Ontario to Chippewa, now extends from Niagara to Fort Erie about 30½ miles.
13	Welland	do Welland	27 June 1859	25.00	25.00	From Port Dalhousie, Lake Ontario to Port Colborne, Lake Erie.
1	Great Western	do Suspension Bridge, Falls of Niagara to Hamilton	10 Nov., 1853	43.25		
	do	do Hamilton to London	31 Dec., 1853	76.00		
	do	do London to Windsor	27 Jan., 1854	110.00		
	do	Branches—Hamilton to Toronto	3 Dec., 1855	39.00		
	do	do Harrisburgh to Galt and Preston	21 Aug., 1854	16.00	....	Except 4 miles to Preston which were opened on 28 September, 1857.
	do	do Preston to Guelph	28 Sept. 1857	11.50		
	do	do Preston to Berlin	2 Nov., 1857	11.00	....	Not in use.
	do	do Komoka to Sarnia	27 Dec., 1858	51.00		
	do	do Wyoming to Petrolia		5.50		
		Total—Great Western		363.25	363.25	Under one Management.
5	London and Port Stanley	Main Line—London and Port Stanley	1 Oct., 1856	24.00	24.00	Lake Erie to London.
4	Buffalo and Lake Huron	de Fort Erie (opposite Buffalo) to Paris	1 Nov., 1856	83.00		
	do do	do Paris to Stratford	22 Dec., 1856	32.00		
	do do	do Stratford to Goderich (Temporary Terminus)	28 June, 1858	43.73		
	do do	do Temporary Terminus to Station in East Street	16 May, 1860	1.27	160.00	From foot of Lake Erie to Lake Huron.
		Total—Railways, Upper Canada			1393.39	
		do Lower Canada			575.25	
		do Lower & Upper Canada			1968.64	

APPENDIX No. 70.—

GENERAL STATEMENT SHOWING THE LENGTH, ROLLING STOCK,

No. of Railway per R. Com. Rep. for 1859-60.	NAME OF RAILWAY.	Length of main track, miles.	Length of sidings, double track, &c., miles.	Number of Engines.	Number of 1st Class Cars.	Number of 2nd Class Cars, Baggage and Conductors Cars.	Number of Freight Cars.	Number of Platform and Timber Cars.	Number of other Cars, (not including hand Cars.)	Number of Passengers carried.
1	Great Western...................	352.25	(*a*) 59.75	94	83	91	956	260	120	756,232
2	Grand Trunk (*c*)	1,376.50	137.50	298	152	230	2,557	1,307	93	1,431,195
3	Northern............................	(*d*) 96.75	16.00	18	18	13	114	229	4	137,379
4	Buffalo and Lake Huron.....	(160.00	Included	in Gra	nd Tru	nk.)	....	....	....	....
5	London & Port Stanley (*e*)..	24.00	4.00	2	3	6	28	14	....	37,098
6	Cobourg, Peterboro & Marmora (*f*)	28.00	....	None.	None.	None.	1	12	None.	515
7	Erie and Ontario (*g*)	17.00	....	....	....	....	....	....	....	....
8	Ottawa and Prescott..........	54.00	2.00	7	6	6	53	26	....	46,009
9	Montreal and Champlain...	(83.00	Included	in Gra	nd Tru	nk.)	....	....	....	....
10	Carillon and Grenville........	12.75	0.50	2	2	3	2	3	....	23,363
11	St. Lawrence and Industry..	12.00	0.50	3	2	3	3	14	1	4,828
12	Port Hope, Lindsay and Beaverton..........................	56.50	1.50	8	6	2	21	112	....	(*h*) 22,020
13	Welland	25.00	5.50	5	3	None.	145	8	....	38,625
14	Brockville and Ottawa.......	86.50	3.50	6	4	3	17	82	....	46,221
15	Stanstead, Shefford and Chambly (*e*)..................	43.00	21.75	Roll'g	Stock	leased	from	Vt. Ce	nt'l. R.	21,000
16	Peterborough and Chemung Lake........	4.00	....	Appea	rs to b	e inclu	ded in	No. 6.	....	....
	Totals......................	2,188.25	252.50	443	279	357	3,897	2,067	218	2,564,485

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* Compiled chiefly from "Miscellaneous Statistics" of Canada, for the year 1866, Part 1.—Signed by

(*a*) There is a third rail laid down along 229 miles of the main line, on a guage of 4 feet 8½ inches, and

(*b*) Including renewals.

		Miles.		
(*c*) Including subsidiary lines, viz ;—	Buffalo and Lake Huron......	160		in Canada.
	Montreal and Champlain...........	83		do
		——	243	do
	Atlantic and St. Lawrence.........	166		in the United States.
	Port Huron and Detroit............	62		do
		——	228	do
	Total subsidiary lines...		671	Canada & United States.

(*d*) The length of the Northern Railvay is marked 95.14 miles in the Report of the Railway Commissioners 1868.—In Appendix No. 70 of Com. Rep. for 1867, it is entered as being 94.14 miles in length, which appears

(*e*) The London and Port Stanley and the Stanstead, Shefford and Chambly Railways have made no

(*f*) Only 14 miles of this road were reported as being in operation in 1866, from Cobourg to Rice bridge across Rice Lake. No returns have been published, as yet, respecting the Marmora Section of the

(*g*) The Erie and Ontario Railway was not opened to the public in 1866. It now extends from Niagara

(*h*) These figures relate to the Lindsay road only, and do not include traffic on the branch from Millbrook

REFERENCES.—*Continued.*

TRAFFIC, &c., OF THE RAILROADS OF CANADA, 1866.*

Number of Passengers carried one mile.	Number of tons of freight carried.	Number of tons of freight carried one mile.	Receipts from. Passengers.	Receipts from. Freight.	Receipts from. Mails and Sundries	Receipts from. Rents from other sources.	Total Receipts.	Working Expenses proper.	Cost of renewal of rails, ties, bridges, &c.
			$	$	$	$	$	(b) $	$
56,813,982	489,494	65,349,312	1,535,476	1,625,651	139,478	63,889	3,364,494	1,611,447	Included in Working Expendit're
....	1,021,137	....	2,478,049	3,816,987	269,282	38,755	6,603,073	3,976,200	601,897
4,121,908	187,938	10,488,960	123,956	364,478	23,516	925	512,875	309,086	55,275
....	....	....	....	....	....	....	....	....	....
....	23,291	....	14,855	16,328	2,008	....	33,191	26,044	....
7,210	20,000	280,000	257	16,413	....	....	16,670	13,390	1,200
....	....	....	....	....	....	....	....	....	....
....	28,839	....	56,698	39,642	8,395	....	104,735	68,259	101,336
....	....	....	....	....	....	....	....	....	....
....	730	....	11,021	1,460	500	....	12,981	7,051	....
....	2,745	....	1,989	5,490	....	....	7,479	5,881	....
....	122,398	....	31,903	140,018	2,700	195	174,816	80,000	....
....	125,650	....	13,699	78,323	400	14,524	106,946	70,051	8,500
1,239,601	39,585	....	40,127	63,733	5,116	4,226	113,202	62,964	32,903
....	26,071	....	14,018	40,717	3,685	....	58,420	44,138	....
....	....	....	....	....	....	....	....	....	....
....	2,087,878	....	4,322,048	6,209,240	455,080	122,514	11,108,882	6,274.511	801,111

John Langton, Auditor, at Ottawa, 1867.

there are 15 miles altogether of third rail in the sidings.

for 1859–60, 96¾ miles in "Miscellaneous Statistics" for 1866, and 94 miles in the Railway Time Tables for
to be the most correct, so far as ascertained.

returns for 1866; the figures for 1865 are therefore repeated.

Lake; the section from Rice Lake to Peterborough is not in use owing to the failure, some years ago, of the
Railway, the length of which has not been ascertained.

to Fort Erie, a distance of about 30½ miles, but is not so entered for the want of official returns.

to Peterborough, 13½ miles in length.

APPENDIX No. 70.—

GENERAL STATEMENT SHOWING THE LENGTH, DATE OF OPENING AND COST OF PROPORTION OF ROLLING STOCK FOR EACH 100 MILES, THE NUMBER OF FREIGHT, AND THE WORKING EXPENSES PER MILE PER ANNUM, 1866.*

No. of R. p. R. Com'rs' Rep. for 1859-60.	NAME OF RAILWAY.	Length of Main Track, in miles.	When opened.	Cost of Construction and Equipment.	Cost per mile.
				$	$ cts.
1	Great Western	(*a*) 352.25	10th Nov., 1853 to 27th Dec., 1588	24,777,430	70,340 47
2	Grand Trunk (*b*)	1376.50	1847 to 1860...	102,802,502	74,683 40
3	Northern	(*c*) 96.75	13th June, 1853 to 2nd Jan., 1855	5,457,789	56,411 26
5	London and Port Stanley	24.00	1st Oct., 1856...	1,032,850	43,035 41
6	Cobourg, Peterboro' and Marmora	(*d*) 28.00	May, 1854...	900,000	32,142 85
7	Erie and Ontario	(*e*) 17.00	3rd July, 1854...	300,000	17,647 06
8	Ottawa and Prescott	54.00	Dec., 1854...	2,008,994	37,203 59
10	Carillon and Grenville	12.75	Oct. 1854...	98,761	7,745 96
11	St. Lawrence and Industry	12.00	May, 2850...	54,100	4,508 33
12	Port Hope, Lindsay and Beaverton	56.50	30th Dec., 1857...	1,993,580	35,284 60
13	Welland	25.00	27th June, 1859...	1,622,843	64,913 72
14	Brockville and Ottawa	86.50	17th Feb., 1859 to 31st Dec., 1860	2,647,004	30,601 20
15	Stanstead, Shefford and Chambly	43.00	1st Jan., 1859 to 31st Dec., 1859	1,216,000	28,279 07
16	Peterborough and Chemung Lake	4.00	....	Appears to be	included in
		(*f*) 2188.25	(*g*)	(*h*) 144,911,853	66,222 71

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* (Compiled from Railway Commissioners' Report for 1859-60 and Miscellaneous Statistics of Canada,

(*a*) Exclusive of 11 miles, from Preston to Berlin, reported to be no longer in use.

(*b*) The Grand Trunk comprises the following Subsidiary Lines, in Canada and the United States :—

No. of R. per R. Com'rs Rep. for 1859-60.	Name of Railway.
4	Buffalo and Lake Huron ....
9	Montreal and Champlain ....
	Total Subsidiary Lines in Canada .... $
	Atlantic and St. Lawrence ....
	Port Huron and Detroit ....
	Total Subsidiary Lines in United States .... $

(*c*) The length shown in the Railway Time Tables is only 94 miles; in the Report of the Railway

(*d*) The length of Railway open for traffic has been returned as being only 14 miles; on this are based under Cost of Construction and Equipment is the original cost to the present owners; the present value

(*e*) No returns have been obtained for this Railway; the amount marked as Cost of Construction and not opened to the public in 1866; it was rebuilt and re-opened during the summer of 1867; it now extends

(*f*) The figures indicating the length of main track are taken from the Report of the Commissioners

(*g*) The figures indicating the time when built, are taken from the Report of the Commissioners of

(*h*) See page 555, Appendix No. 70, Report of the Commissioners of Public Works for 1867.

† These figures relate to the Lindsay Road only, and do not include passengers on the Branch from

REFERENCES.—*Continued.*

RAILWAYS, IN THE UNITED PROVINCES OF LOWER AND UPPER CANADA, THE PASSENGERS PER MILE PER ANNUM, THE RECEIPTS FROM PASSENGERS AND

Proportion of Rolling Stock for each 100 miles.					Number of passengers per mile per annum.	Receipts per Mile per Annum.			Working Expenses per Mile per Annum.		
Locomotives.	1st Class Cars.	2nd Class Cars.	Freight Cars.	Platform Cars.		From Fassengers.	From Freight.	Gross Receipts.	Working Expenses proper	Renewal of rails, ties, bridges, &c.	Total working expen.
						$ etc.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
27	24	26	272	74	2,147	4,359 05	4,615 05	9,551 44	4,574 73	Included in working expenses	4,574 73
22	11	17	186	95	1,039	1,801 00	2,772 96	4,797 00	2,888 56	437 26	3,325 82
18	18	13	114	229	1,420	1,281 19	3,767 21	5,301 03	3,194 68	571 31	3,765 99
8	12	24	112	56	1,545	618 95	680 33	1,383 00	1,085 08	....	1,085 08
....	....	....	7	86	37	18 36	1,172 35	1,190 71	956 43	85 71	1,042 14
....	....	....	....	....	....	....	....	....	....	....	....
13	11	11	98	48	852	1,049 96	734 11	1,939 54	1,264 05	1,876 59	3,140 64
15	15	23	15	23	1,832	864 39	114 58	1,018 12	553 01	....	553 01
25	17	25	25	117	402	165 75	457 50	623 25	490 08	....	490 08
14	11	4	38	131	† 512	564 65	2,478 19	3,094 09	1,415 93	....	1,415 93
20	12	None.	580	32	1,545	547 96	3,132 92	4,277 84	2,802 04	340 00	3,142 04
7	5	3	20	95	534	463 89	736 79	1,308 69	727 90	380 38	1,108 28
Roll'g mont No. 6.	Stock Centra	leased l Rail	from way.	Ver-	488	* 326 00	946 90	1,358 60	1,026 46	....	1,026 46
	....	....	....	....	....	....	....	....	....	....	....
20	13	16	178	94	1,179	1,975 11	2,837 54	5,076 61	2,867 36	316 74	3,233 46

published in 1867, and signed by John Langton, Auditor.

Miles.	Cost of Construction and Equipment.	Cost per Mile.
	$	$ cts.
160.00	8,000,780	50,004 87
83.00	2,417,688	29,128 77
243.00	10,418,468	42,874 35
166.00	5,978,900	36,017 47
62.00	2,169,736	34,995 74
228.00	8,148,636	35,739 63

Commissioners for 1859–60 it is marked 95.14.

the figures in the various columns, excepting the cost of construction and cost per mile. The amount marked is stated at $109,000.

Equipment is that which was invested by local municipalities. (See Statement p. 611.) This Railway was from Niagara to Fort Erie, opposite Buffalo, a distance of about 30½ miles.

of Railways for 1859-60 and from the Grand Trunk Railway time tables, published in 1868.

Railways for 1859-60.

Millbrook to Peterborough 13½ miles in length.

APPENDIX No. 70.—REFERENCES.—*Continued.*

Statement showing the amount of each Contract for the various sections of the Grand Trunk Railway, as furnished by Joseph Elliott, Secretary and Treasurer of the Grand Trunk Railway Company in 1861, at which time the various sections of railway were completed or nearly so.—[See printed Report, Commission of Enquiry into affairs of G. T. R., dated 8th May, 1861.]

SECTION.	CONTRACTORS.	AMOUNT OF ORIGINAL CONTRACT.		Amount paid to Contractors, up to 1861.
		Sterling.	Currency.	
		£	$ cts.	$ cts.
Eastern Division:				
Quebec to Trois Pistoles Completed to Rivière du Loup only	Peto & Co	1,224,000 from Quebec to Trois Pistoles	5,956,800.00	8,668,062.94
Quebec to Richmond	do	624,000	3,036,800.00	
Charons Branch	J. Reekie	....	....	74,162.00
Victoria Bridge	Peto & Co	1,250,000	6,083,333.33	6,346,133.33
Central Division:				
Montreal to Toronto	do	3,600,000	14,600,000.00	16,932,377.17
Moiety of Company's disbursement for Toronto Esplanade	Gzowski & Co	....	....	6,385,59
Moiety of Track over Toronto Esplanade	do	....	....	36,336·67
Kingston Branch	Morton & Dickson	....	....	142,131.27
Western Division:				
Toronto to Sarnia	Gzowski & Co	1,376,000	6,696,333.33	8,644,349.44
Moiety of Company's disbursement for Toronto Esplanade	do	....	....	6,385.59
Moiety of Track over do	do	....	....	36,336.67
Compensation for stoppage of Works	do	....	....	121,666.67
Additions to Portland Line	Peto & Co	....	....	5,095.92
Totals, exclusive of Arthabaska Line	....	£7,474,000	$36,373,466.66	41,019,423.26
Three Rivers and Arthabaska Line on Eastern Division	Joseph E. Turcotte	....	1,036,600.00	Not ascertained.
Total, inclusive of Arthabaska Line	....	.... $	37,410,066.66	Not ascertained.

APPENDIX No. 70.—REFERENCES.—*Continued.*

STATEMENT SHOWING THE GOVERNMENT LOANS TO EACH MUNICIPALITY, AND THE OBJECTS FOR WHICH THE SAME WERE ADVANCED, UP TO 31ST DECEMBER, 1864, OUT OF THE LOWER CANADA MUNICIPAL LOAN FUND.

MUNICIPALITIES.	LOANS.	Objects for which advanced.	
	Total.	Railroads.	Local Purposes.
	$ cts.	$ cts.	$ cts.
County of Stanstead for Townships of Steanstead, Magog and Bolton	71,000 00	71,000 00	
County of Shefford	215,000 00	215,000 00	
County of Terrebonne	94,000 00	94,000 00	
County of Ottawa	131,600 00	131,600 00	
County of Megantic for Township of Ireland	5,840 00	5,840 00	
City of Montreal	800,000 00		800,000 00
Township of Acton	24,000 00		24,000 00
Town of St. Hyacinthe	16,000 00		16,000 00
Town of Sherbrooke	80,000 00		80,000 00
Village of Varennes	2,000 00		2,000 00
Village of Huntingdon	7,000 00		7,000 00
Township of Roxton	30,000 00		30,000 00
Township of Tingwick	10,000 00		10,000 00
Town of St- John	20,000 00		20,000 00
Village of Laprairie	4,000 00		4,000 00
Township of Tring	20,000 00		20,000 00
Parish de Ste. Marie de Monnoir	4,000 00		4,000 00
Township of West Farnham	30,000 00	30,000 00	
Township of Shefford	57,500 00	50,000 00	7,500 00
City of Three Rivers	220,000 00	160,000 00	60,000 00
Parish of St. Romuald d'Etchemin	20,000 00		20,000 00
Township of Granby	30,000 00	30,000 00	
Town of William Henry, (Sorel)	20,000 00		20,000 00
Townships of Ascot and Westbury	8,000 00		8,000 00
Parish of St. Jean, Ile d'Orléans	5,000 00		8,000 00
Township of Somerset, North	16,000 00		16,000 00
Parish of St. Germain de Rimouski	50,000 00		50,000 00
Parish of St. Michel de Bellechasse	24,000 00		24,000 00
Village of Longueuil	12,000 00		12,000 00
Village of Chambly Basin	10,500 00		10,500 00
City of Quebec	50,000 00	50,000 00	
Parish of St. Eusèbe de Standfold	3,000 00		3,000 00
Township of Bolton	13,000 00	13,000 00	
Township of Stukeley, North	16,000 00	16,000 00	
Township of Stukeley, South	10,000 00	10,000 55	
Village of Fermont	32,000 00		32,000 00
Town of Terrebonne	10,000 00		10,000 00
Township of Magog	12,000 00	12,000 00	
Village of Princeville	12,000 00		12,000 00
Parish Ste. Hélène de Kamouraska	1,200 00		1,200 00
Townships Grantham, Wendover and Simpson	10,000 00		10,000 00
Parish Ste. Cécile de Beauharnois	10,000 00		10,000 00
Township of Inverness	18,000 00		18,000 00
Parish Ste. Anne de la Pérade	20,000 00		20,000 00
Grande Baie	4,000 00		4,000 00
Bagotville	4,200 00		4,200 00
Village of Artabaskaville	4,000 00		4,000 00
Township of Laterrière	3,300 00		3,300 00
Township de Chicoutimi	5,000 00		5,000 00
Township of Tremblay	2,400 00		2,400 00
Grande Rivière	1,575 00		1,575 00
Town of Lévis	40,000 00		40,000 00
Parish St. Valère de Bulstrode	6,000 00		6,000 00
Village of St. Jean Baptiste	2,000 00		2,000 00
Parish St. Armand, West	15,000 00	15,000 00	
Township of Stanbridge	50,000 00	50,000 00	

APPENDIX No. 70.—REFERENCES.—*Continued,*

STATEMENT SHOWING THE GOVERNMENT LOANS TO EACH MUNICIPALITY, &c., OUT OF THE LOWER CANADA MUNICIPAL LOAN FUND.—*Continued.*

MUNICIPALITIES.	LOANS.	Objects for which advanced.	
	Total.	Railroads.	Local Purposes.
	$ cts.	$ cts.	$ cts.
Village of Phillipsburg	2,000 00	2,000 00	....
Parish of St. Maurice	1,000 00	....	1,000 00
Parish Notre Dame du Mont Carmel	1,000 00	....	1,000 00
Parish St. Christophe d'Arthabaska	1,000 00	....	1,000 00
Township of Chester, West	675 00	....	675 00
Parish St. Paulin	400 00	....	400 00
Parish St. Narcisse	1,000 00	....	1,000 00
Parish St. Frédéric, (Beauce)	1,000 00	....	1,000 00
Township of Warwick	1,000 00	....	1,000 00
Village of Victoriaville	4,000 00	....	4,000 00
Townships of Ham and South Ham	1,000 00	....	1,000 00
Parish St. Stanislas, (Rivière des Envies)	1,000 00	....	1,000 00
Parish La Visitation, (Champlain Parish)	1,000 00	....	1,000 00
Township of Acton	1,000 00	....	1,000 00
Parish Ste. Geneviève de Batiscan	750 00	....	750 00
Parish St. Prospère	1,000 00	....	1,000 00
Parish Ste. Marie Madeleine	800 00	....	800 00
Parish St. Didace	1,000 00	....	1,000 00
Parish Aubert Gallion	1,000 00	....	1,000 00
Parish St. Jean de Matha	1,000 00	....	1,000 00
Parish St. Célestin	1,000 00	....	1,000 00
Parish St. Polycarpe	1,000 00	....	1,000 00
Township of Wotton	1,000 00	....	1,000 00
Township Ste. Camille	1,000 00	....	1,000 00
Township of Newton	1,000 00	....	1,000 00
Parish Pointe du Lac	400 00	....	400 00
Parish of St. Joseph, (Beauce)	1,000 00	....	1,000 00
Parish of St. François, (Beauce)	1,000 00	....	1,000 00
Parish Ste. Marie, (Beauce)	1,000 00	....	1,000 00
Township of St. Jean, Chicoutimi	400 00	....	400 00
Village of Plessisville	2,000 00	....	2,000 00
Total......$	2,423,540 00	955,440 00	1,473,100 00

APPENDIX No. 70.—REFERENCES.—*Continued.*

STATEMENT OF THE RAILWAY INVESTMENTS MADE BY THE MUNICIPALITIES OF UPPER CANADA, FROM THE MONIES BORROWED BY THEM ON THE CREDIT OF THE MUNICIPAL LOAN FUND.

MUNICIPALITIES.	RAILROADS IN WHICH INVESTED.	STOCK.	LOANS.	TOTAL.
		$ cts.	$ cts.	$ cts.
Town of Niagara	Erie and Ontario Railroad	60,000 00	220,000 00	
Village of Chippewa	do do	20,000 00		300,000 00
Township of Bertie	Buffalo, Brantford & Goderich Railroad	40,000 00		
do Brantford	do do	50,000 00		
Town of Brantford	do do	100,000 00	400,000 00	
Township of Wainfleet	do do	20,000 00		
do Canborough	do do	8,000 00		
U. C. Huron and Bruce	do do	300,000 00		
Townships of Moulton & Sherbrooke	do do	20,000 00		
County of Perth	do do	200,000 00		
Town of Paris	do do	40,000 00		
Town of Statford	do do	....	100,000 00	1,278,000 00
City of Ottawa	Bytown and Prescott R. R	....	200,000 00	
Town of Prescott	do do	....	100,000 00	300,000 00
Town of St. Catharines	Port Dalhousie and Thorold Railway	100,000 00	....	100,000 00
Town of Woodstock	Woodstock and Lake Erie Railway & Harbor Company	....	100,000 00	
Township of Woodhouse	do do	....	80,000 00	
do Norwich	do do	....	200,000 00	
do Windham	do do	....	100,000 00	
Town of Simcoe	do do	....	100,000 00	580,000 00
County of Elgin	London and Port Stanley R.R.	80,000 00	....	
City of London	do do	200,000 00	175,400 00	455,400 00
U. C. Lanark and Renfrew	Brockville and Ottawa R. R.	....	800,000 00	
Town of Brockville	do do	....	400,000 00	
Township of Elizabethtown	do do	....	154,000 00	1,354,000 00
Town of Guelph	Galt and Guelph R. R.	80,000 00	....	80,000 00
Town of Cobourg	Cobourg and Peterboro' R. R.	500,000 00	....	500,000 00
Town of Port Hope	Peterboro' and Port Hope R. R Port Hope Lindsay and Berverton R. R	680,000 00		
Township of Hope	do do	60,000 00		
Township of Ops	do do	80,000 00		
Town of Peterboro'	do do	....	100,000 00	920,000 00
	Totals $	2,638,000 00	3,229,400 00	5,867,400 00

APPENDIX No. 70.—REFERENCES.—*Continued.*

EXTRACT FROM A RETURN

To an Address from the Legislative Assembly to His Excellency the Governor General, dated the 15th ultimo, praying His Excellency to cause the proper Officer to lay before the House, a Statement of the Amount expended on each Public Work in Upper and Lower Canada, prior to the Union, for Debentures outstanding, and which form a portion of the debt of United Canada, &c., &c.

By Command,

D. DALY,
Secretary.

Secretary's Office,
Montreal, 27th July, 1847.

A Statement of the Amount expended on each Public Work in Upper or Lower Canada, prior to the Union, for which Debentures were issued, and forming a portion of the Debt of United Canada.

NAMES OF WORKS.	Expenditure prior to Union. £ s. d.	Average rate of Interest.
Brockville and St. Francis Road	7,431 19 3	5 per cent.
Cobourg Harbour Company, £3,000 at 5⅞ per cent. Interest	4,002 13 7	do
Cobourg Harbour Company, new Account	1,000 0 0	do
Desjardins Canal Company, £17,000 at 6 per cent. Interest	21,507 11 2	do
Dundas and Waterloo Road	27,911 5 10	do
Erie and Ontario Railroad Company, £5,000 at 6 per cent. Interest	5,246 19 7	do
Grand River Navigation Company, £500 at 6 per cent. Interest	562 2 8	do
Grantham Academy	304 15 6	do
Hamilton and Brantford Road, £23,430 at 6 per cent. Interest	43,667 15 5	do
Kingston and Napanee Road, £4,988 17s. 9d. at 6 per cent. Interest	39,149 19 3	do
Oakville Harbour Company, £2,500 at 6 per cent Interest	3,590 5 5	do
Port Hope Harbour Company, £2,000 at 5⅞ per cent. Interest	2,970 15 8	do
Queenston and Grimsby Road, £2,000 at 6 per cent. Interest	19,626 3 10	do
Tay Navigation Company	1,407 11 9	do
East York Road Trust	24,374 7 3	do
West York Road Trust	26,232 0 5	do
Yonge Street Road Trust, £12,760 at 6 per cent. Interest	42,106 2 2	do
Montreal Turnpike Trust — For these Works the Public Funds are only pledged for the Interest.	47,000 0 0	do
Longueuil and Chambly Trust	15,000 0 0	do
Quebec Turnpike Trust	33,850 0 0	do
Brantford Bridge, £1,500 at 6 per cent. Interest	2,000 0 0	do
Chatham Bridge, £1,859 at 6 per cent. Interest	2,000 0 0	do
Dunnville Bridge	1,700 0 0	do
Inland Waters, Newcastle District, £2,000 at 6 per cent Interest	21,660 0 0	do
Kettle Creek Harbour, £5,500 at 6 per cent. Interest	7,500 0 0	do
Provincial Penitentiary	34,207 15 1	do
Kingston Hospital	3,000 0 0	do
Paris Bridge	2,000 0 0	do
Parliament Buildings, Toronto	5,000 0 0	do
Trent Navigation, £3,050 at 6 per cent. Interest	22,738 9 1	do
Trent Bridge, £2,000 at 6 per cent. Interest	4,800 0 0	do
Newcastle District Improvements		
Toronto Harbour	5,200 0 0	do
West Guilliamsburg Road and Bridge	1,000 0 0	do
Carried over......£	479,748 12 11	5 per cent.

APPENDIX No. 70.—REFERENCES.—*Concluded.*

A STATEMENT of the Amount expended on each Public Work in Upper or Lower Canada, prior to the Union, for which Debentures were issued, and forming a portion of the Debt of United Canada.

NAMES OF WORKS.	Expenditure prior to Union.			Average rate of Interest.
	£	s.	d.	
Brought over	479,748	12	11	5 per cent.
Welland Canal, £71,496 14s. at 6 per cent Interest	503,924	6	5	do
St. Lawrence Canals	440,097	11	0	do
Chambly Canal	35,000	0	0	do
Harbour of Montreal	89,425	0	0	do
Steam Dredge, Montreal	1,500	0	0	do
River Richelieu				do
Military Road, L'Orignal				do
River Ottawa				do
Main North Toronto Road				do
Burlington Bay Canal				do
Hamilton and Port Dover Road				do
London and Brantford Road				do
London, Chatham and Amherstburgh Road				do
London and Sarnia Road				do
Light Houses, and Harbours and Roads leading thereto				do
Lake St. Peter				do
Bridges between Montreal and Quebec				do
Gosford Road				do
Bay of Chaleur Road				do
Cascades Road				do
Gaspé Roads				do
Arthabaska Road				do
Grand River Swamp Road				do
Lancaster Bridge, River Trent				do
Rondeau Harbour				do
St. Anns Rapids				do
Bayonne Bridge				do
Gananoque Bridge				do
Saugine Road				do
Dover Road				do
Rice Lake Road				do
Caledonia Bridge				do
London and Port Stanley Road Toll Houses				do
Rondeau Road				do
Chaudière Bridge				do
Cascades Road, erection of Toll Houses				do
Union and Delaware Bridges				do
Totals £	1,549,695	10	4	5 per cent.

NOTE.—The above Statement does not embrace the Expenditure on Works charged to the Consolidated Revenue Fund, and not applicable to the Public Debt, viz:—Welland Canal, £79,117 19s, 4d.; River Ottawa, £11,504 1s. 8d.; Newcastle District Improvements, £13,600 3s. 4d. And other Works provided for in like manner. See Public Accounts.

GENERAL REMARK.

This Appendix (No. 70) has been prepared at the special request of the Deputy Commissioner of Public Works.

The cost of the various works enumerated herein has not been fully established in all cases, especially as regards those constructed before the Union of the late Provinces of Lower and Upper Canada, for the want of official records which cannot be procured.

Every precaution has been taken to ascertain the cost of construction of the various works as nearly as it was possible to do so from existing records.

G. F. BAILLAIRGE, C.E.

OTTAWA, 8th April, 1868.

APPENDIX No. 71.

LIST of Commissioners, &c., of Public Works, from 1841 to 1867.

NAMES.		From	To
UNDER STATUTE 4, 5 VIC., CAP. 38.			
Corporation of Board of Works.			
Hon. H. H. Killaly, Chairman.		Dec. 29th, 1841...	Oct. 3rd, 1844
“ D. Daly............	Members.		
“ S. B. Harrison...			
J. Davidson, Esq.........			
New Board of Works.			
Hon. H. H. Killaly, Chairman.		Oct. 5th, 1844...	June 8th, 1846
“ D. Daly......... ..	Members.		
“ W. H. Draper.....			
“ W. Morris.........			
“ D. B. Papineau.			
UNDER STATUTE 9 VIC., CAP. 37, &c.			
“ W. B. Robinson, Chief Commissioner		July 4th, 1846..	March 10th, 1848
“ E. P. Taché, “		March 11th, 1848..	Nov. 26th, 1849
“ J, Chabot, “		Dec. 15th, 1849..	March 31st, 1850
“ W. H. Merritt, “		April 20th, 1850..	Feb. 11th, 1851
“ J. Bourret, “		Feb. 15th, 1851..	Oct. 27th, 1851
“ John Young, “		Oct. 28th, 1851..	Sept. 22nd, 1852
“ J. Chabot, “		Sept. 23rd, 1852..	Jan. 26th, 1855
“ F. Lemieux, “		Jan. 27th, 1855..	Nov. 25th, 1857
“ C. Alleyn, “		Nov. 28th, 1857..	Aug. 1st, 1858
“ L. H. Holton, “		Aug. 2nd, 1858..	Aug. 6th, 1858
“ L. V. Sicotte, “		Aug. 6th, 1858..	Jan. 10th, 1859
“ John Rose, “		Jan. 15th, 1859..	June 12th, 1861
“ Jos. Cauchon, Commissioner		June 15th, 1861..	May 23rd, 1862
“ U. J. Tessier, “		May 24th, 1862..	May 27th, 1863
“ L. T. Drummond, “		May 28th, 1863..	July 23rd, 1863
“ M. Laframboise, “		July 23rd, 1863..	March 29th, 1864
“ J. C. Chapais, “		March 30th, 1864..	June 30th, 1867

APPENDIX No. 72.

LIST of Assistant and Deputy Commissioners, Chief Engineers and Secretaries of the Board of Works and of the Department of Public Works from 1841 to 1867.

—	Names.	Date of Appointment.
Second Commissioner	Hon. Chs. Eus. Casgrain	1st August, 1846.
Assistant Commissioner	Hon. Malcom Cameron	11th March, 1848.
do	John Wetenhall	2nd Feb., 1850.
do	Hon. Jos. Bourrett	20th April, 1850.
do	Hon. H. H. Killaly	15th Feb., 1851.
Deputy Commissioner	Samuel Keefer	6th May, 1859.
do	Toussaint Trudeau	15th March, 1864.
Chief Engineer	Samuel Keefer	17th August, 1841.
do	John Page	31st Oct., 1853.
Secretary	Thomas A. Begly	17th August, 1841.
	do under Act establishing Depart. of Public Works	25th Sept., 1847.
do	Toussaint Trudeau	13th Dec., 1859.
do	Frederick Braun	8th March, 1864.

ERRATA.

Page.	Line from top of page.	Line from bottom of page.	Instead of	Read
Index.				
xi	1	....	Appendice "No. 76"........	Appendix "No. 70."
Com. Rep.				
65	....	18	23 to "237" for breadth of locks, 3, 4, 5, 6.	23 to "$23\frac{7}{12}$"
113	5	....	"181"	"176."
Appendix.				
68	5	....	"Carriage-way," under heading of Culverts.	"Drainage."
80	9	....	"412 feet," in 2nd column, Light House, No. 6.	"412 yards."
90	....	3	"Eglise," in 5th column........	"Church."
108	....	23	"3030"........	"30 × 30."
123	7	....	"76"........	"67."
125	....	10	"71"........	"61."
127	....	9	Height, "56"........	"560."
141	16	....	"Work," in remarks........	"Rock."
166	4	....	"Ste. Claire"........	"Detroit."
179	....	9	"Government"........	"Government, & other sources."
193	1	....	128 "from" G. T. R. Government Wharf.	128 "per" G. T. R. "to" Government Wharf.
196	1	....	"128," last column........	"125."
201	18	32	31st December, "1867"........	31st December, "1857."
250	....	1	"$4, 74"........	"$4,674."
261	....	14	"Grand Trunk"........	"Great Western."
262	12	....	"Strawsburgh"........	"Shrewsbury."
262	....	19	"Chief Justice Sewell"........	"Geo. Alford, universal legatee of the late George Pozer."
265	....	4 and 5	"Total," from 1st January........	"From 1st January."
			"Black line," under £3,445 and $13,780........	To be struck out.
277	....	9	"Municipal Loan Fund"........	"Municipalities Fund."
313	....	At bottom ...	"1853," in remarks........	"1881."
322	....	do	"do," under Dundee........	"St. Régis."
323	At top........	....	Add to the list of Public Buildings belonging to Government.	"Montreal New Court House."
326	8	....	"New Carlisle, County of Bonaventure.	"Percé, County of Gaspé."
326	9	....	"Percé, County of Gaspé........	"New Carlisle, County of Bonaventure."
357	....	2	18 "feet"........	18 "inches."
383	At top........	....	"Lower" mitre sill........	"Upper" mitre sill.
400	4	....	"1860"........	"1864."
422	....	10	"No. 25," Edwardsburgh........	"No. 26," Edwardsburgh.
		11	"No. 24," Iroquois........	"No. 25," Iroquois.
437	17	....	"Jacques"........	"François."
437	....	8	"190"........	"100."
439	At top........	....	"leading to"........	"leading from."
451	Last column	is included in	preceding one.	
463	Last column.	....	Net revenue, $104,584.22 "at Burlington Bay Canal."	Applies to "Welland Canal."
			Net revenue, $3,745.12 "at Ste. Anne Lock."	Applies to "Burlington Bay."
523	....	12	"1841"........	"1847."
557	7	....	"548," in 1st column........	"551."
559	....	1	"553," in 1st column........	"555."
587	....	7	"1847, in reference........	"1867."
604	....	8	"671"........	"471."

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